

Office of the Deputy Assistant Secretary of Defense,
Health Service Operations (ODASD(HSO))
Medical Functional Integration Management (MFIM)

Medical Logistics Functional Integration Management To-Be Modeling Workshop

AD-A269 405



DTIC
ELECTE
SEP 03 1993
S E D

BUSINESS PROCESS IMPROVEMENTS

MEDICAL
LOGISTICS
TO BE

AUTOMATED EDI FOR CONTRACT SERVICES

AUTOMATED REQUISITION

CONTRACTING WARRANTS

UNOFFICIAL INVENTORY RECAPTURE

MEDICAL
LOGISTICS
AS IS

"IMPROVING TODAY FOR A BETTER TOMORROW"

93-20570



4778

Final Report

April 12, 1993 through June 18, 1993

93

9

2

June 1993

This document was prepared by the participants of the Medical Logistics Workshop as a culmination of the Medical Logistics Functional Integration Management (FIM) TO-BE Activity and Data Modeling Workshop. Systems Research and Applications Corporation (SRA), under contract number 903-91-D-0061, provided workshop facilitation at 2000 15th Street North, Arlington, VA, 22201.

Mr. Chuck Rounds may be contacted for additional information or copies of this report.

This report was published in part to satisfy the intent of the Department of Defense (DoD) 8020.1-M (Draft), *Functional Process Improvement* document.

Other reports published through this initiative:

- *Medical Logistics Functional Integration Management Baseline/Scoping Workshop Report*, January 1993
- *Medical Logistics Functional Integration Management Activity Based Costing and Data Modeling Workshop*, Volume I and Volume II, April 1993

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
1 AGENCY USE ONLY (Leave blank)				
2 REPORT DATE		3 REPORT TYPE AND DATES COVERED		
4. TITLE AND SUBTITLE Medical Logistics Functional Integration Management To-Be Modeling Workshop Final Report, April 12, 1993-June 18, 1993			5 FUNDING NUMBERS	
6 AUTHOR(S)				
7 PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Office of the Deputy Assistant Secretary of Defense Health Service Operations (ODASD(HS))) Medical Functional Integration Management (MFIM)			8 PERFORMING ORGANIZATION REPORT NUMBER	
9 SPONSORING MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10 SPONSORING MONITORING AGENCY REPORT NUMBER	
11 SUPPLEMENTARY NOTES				
12a DISTRIBUTION AVAILABILITY STATEMENT Distribution A Approved for Public Release; Distribution is Unlimited			12b DISTRIBUTION CODE	
13 ABSTRACT (Maximum 200 words) The To-Be Activity Workshop consisted of representatives from the Tri-Service Medical Logistics community. The purpose of the workshop was to use the business process improvement (BPIs), derived during the As-Is activity and data modeling sessions, to develop the To-Be Medical Logistics business environment. The Systems Research and Applications Corporation (SRA) facilitated the workshop using the prescribed corporate Information Management methodology according to DoD Directive 8020.1-M. The results of this workshop provide the tools needed to progress to the next phase of this project. The next phase will include developing functional requirements documentation for an integrated Defense Medical Logistics Standard Support System and will establish the future direction of DoD Medical Logistics through the use of the mission, goals, objectives, and the activity and data models included in this document.				
14 SUBJECT TERMS CIM Collection			15 NUMBER OF PAGES 485	
			16 PRICE CODE	
17 SECURITY CLASSIFICATION OF REPORT Unclassified	18 SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19 SECURITY CLASSIFICATION OF ABSTRACT UL	20 LIMITATION OF ABSTRACT	

GENERAL INSTRUCTIONS FOR COMPLETING SF 298

The Report Documentation Page (RDP) is used in announcing and cataloging reports. It is important that this information be consistent with the rest of the report, particularly the cover and title page. Instructions for filling in each block of the form follow. It is important to *stay within the lines* to meet optical scanning requirements.

Block 1. Agency Use Only (Leave blank).

Block 2. Report Date. Full publication date including day, month, and year, if available (e.g. 1 Jan 88). Must cite at least the year.

Block 3. Type of Report and Dates Covered. State whether report is interim, final, etc. If applicable, enter inclusive report dates (e.g. 10 Jun 87 - 30 Jun 88).

Block 4. Title and Subtitle. A title is taken from the part of the report that provides the most meaningful and complete information. When a report is prepared in more than one volume, repeat the primary title, add volume number, and include subtitle for the specific volume. On classified documents enter the title classification in parentheses.

Block 5. Funding Numbers. To include contract and grant numbers; may include program element number(s), project number(s), task number(s), and work unit number(s). Use the following labels:

C - Contract	PR - Project
G - Grant	TA - Task
PE - Program Element	WU - Work Unit Accession No.

Block 6. Author(s). Name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. If editor or compiler, this should follow the name(s).

Block 7. Performing Organization Name(s) and Address(es). Self-explanatory.

Block 8. Performing Organization Report Number. Enter the unique alphanumeric report number(s) assigned by the organization performing the report.

Block 9. Sponsoring/Monitoring Agency Name(s) and Address(es). Self-explanatory.

Block 10. Sponsoring/Monitoring Agency Report Number. (If known)

Block 11. Supplementary Notes. Enter information not included elsewhere such as: Prepared in cooperation with...; Trans. of...; To be published in.... When a report is revised, include a statement whether the new report supersedes or supplements the older report.

Block 12a. Distribution/Availability Statement. Denotes public availability or limitations. Cite any availability to the public. Enter additional limitations or special markings in all capitals (e.g. NOFORN, REL, ITAR).

DOD - See DoDD 5230.24, "Distribution Statements on Technical Documents."

DOE - See authorities.

NASA - See Handbook NHB 2200.2.

NTIS - Leave blank.

Block 12b. Distribution Code.

DOD - Leave blank.

DOE - Enter DOE distribution categories from the Standard Distribution for Unclassified Scientific and Technical Reports.

NASA - Leave blank.

NTIS - Leave blank.

Block 13. Abstract. Include a brief (*Maximum 200 words*) factual summary of the most significant information contained in the report.

Block 14. Subject Terms. Keywords or phrases identifying major subjects in the report.

Block 15. Number of Pages. Enter the total number of pages.

Block 16. Price Code. Enter appropriate price code (*NTIS only*).

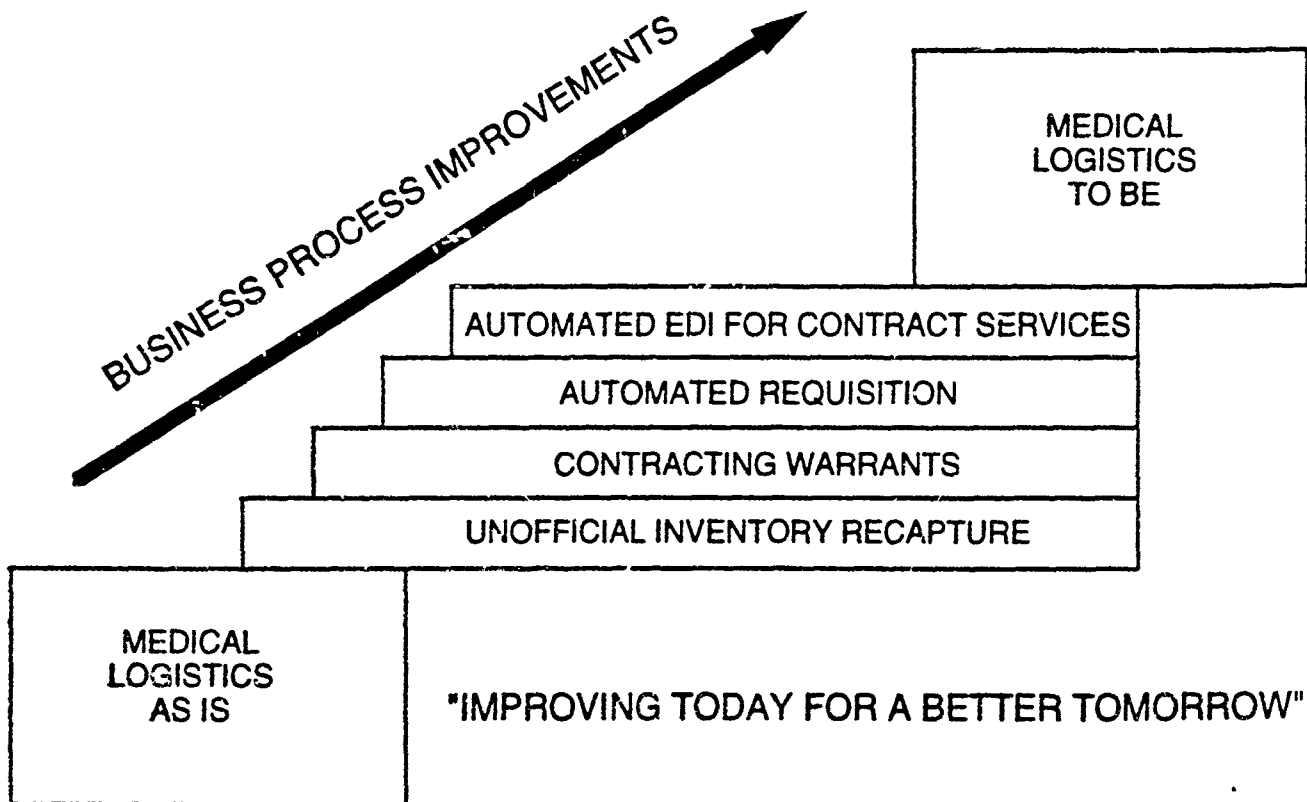
Blocks 17. - 19. Security Classifications. Self-explanatory. Enter U.S. Security Classification in accordance with U.S. Security Regulations (i.e., UNCLASSIFIED). If form contains classified information, stamp classification on the top and bottom of the page.

Block 20. Limitation of Abstract. This block must be completed to assign a limitation to the abstract. Enter either UL (unlimited) or SAR (same as report). An entry in this block is necessary if the abstract is to be limited. If blank, the abstract is assumed to be unlimited.



Office of the Deputy Assistant Secretary of Defense,
Health Service Operations (ODASD(HSO))
Medical Functional Integration Management (MFIM)

Medical Logistics Functional Integration Management To-Be Modeling Workshop



Final Report

April 12, 1993 through June 18, 1993

June 1993

This document was prepared by the participants of the Medical Logistics Workshop as a culmination of the Medical Logistics Functional Integration Management (FIM) TO-BE Activity and Data Modeling Workshop. Systems Research and Applications Corporation (SRA), under contract number 903-91-D-0061, provided workshop facilitation at 2000 15th Street North, Arlington, VA, 22201.

Mr. Chuck Rounds may be contacted for additional information or copies of this report.

This report was published in part to satisfy the intent of the Department of Defense (DoD) 8020.1-M (Draft), *Functional Process Improvement* document.

Other reports published through this initiative:

- *Medical Logistics Functional Integration Management Baseline/Scoping Workshop Report, January 1993*
- *Medical Logistics Functional Integration Management Activity Based Costing and Data Modeling Workshop, Volume I and Volume II, April 1993*

Accession For	
NTIS CRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
A-1	

DTIC QUALITY INSPECTED

Medical Logistics TO-BE Activity and Data Modeling Workshop

TABLE OF CONTENTS

Executive Summary	ES-1
--------------------------------	------

Section 1 Introduction

1.1 Background	1-1
1.2 Mission and Scope of Functional Activity	1-2
1.3 TO-BE Modeling Workshop Mission	1-2
1.4 Workshop Approach	1-2

Section 2 Project Plan

2.1 Workshop Objectives	2-1
2.2 Workshop Scope	2-1
2.3 Critical Success Factors	2-1
2.4 Medical Logistics Workshop Participants	2-2
2.5 Workshop Schedule	2-7

Section 3 Activity Models

3.1 Activity Modeling Techniques	3-1
3.2 Introduction to Activity Models	3-1
3.3 Node Tree Diagrams	3-1
3.4 Context Diagrams	3-2
3.5 Decomposition Diagrams	3-2
3.6 Medical Logistics Node Tree	3-3
3.7 Medical Logistics Activity Models	3-3
3.8 Medical Logistics Activity Model Activity Descriptions	3-90
3.9 Medical Logistics Activity Model ICOM Definitions	3-113

Section 4 Data Models

4.1 Introduction to Data Models	4-1
4.2 Medical Logistics Data Model	4-2
4.2.1 BPI Analysis	4-2
4.2.2 Issues from AS-IS Workshop	4-2
4.2.3 Ad Hoc Issues	4-3
4.2.4 Documentation of Business Rules	4-3
4.2.5 Documentation of Derivable Elements	4-4
4.3 Entity/Attribute List	4-5
4.4 Data Model Entity Definitions	4-44
4.5 Data Model Attribute Definitions	4-68
4.6 Data Model Business Rules	4-112
4.7 Data Model Derivable Values	4-154

TABLE OF CONTENTS (continued)

Section 5	Business Process Improvement Integration Issues	
5.1	Introduction	5-1
5.2	Identifying New BPIs	5-1
5.2.1	Ranking BPIs	5-2
5.2.2	Mapping BPIs to Goals and Objectives	5-3
5.3	BPIs Requiring Action by Higher Authority	5-3
5.4	Integration of the BPIs Into the TO-BE Model	5-4
5.4.1	TO-BE Activity Model	5-4
5.4.1.1	Standardization and Improvement of Processes	5-4
5.4.1.2	Use of Improved Technology	5-4
5.4.2	TO-BE Data Model	5-4
5.4.2.1	Mapping BPIs to the AS-IS Data Model	5-4
5.4.2.2	Improvements Over the AS-IS Business	5-5
Appendix A	Guest Speaker Synopses	A-1
Appendix B	BPI Criteria Rating in Rank Order	B-1
Appendix C	Matrix of Original to Current BPIs	C-1
Appendix D	Matrix of Current to Original BPIs	D-1
Appendix E	Goals and Objectives	E-1
Appendix F	BPIs Mapped to Goals and Objectives	F-1
Appendix G	BPI Position Papers	G-1
Appendix H	BPI to AS-IS Activity Matrix	H-1
Appendix I	Acronyms	I-1
Appendix J	Terms	J-1
Appendix K	Bibliography	K-1

LIST OF FIGURES

Figure 3-1	IDEF0 Activity Box and ICOM Arrows	3-2
Figure 4-1	Sample Entity Format	4-1
Figure 4-2	Sample Relationship	4-2

LIST OF TABLES

Table 2-1	Workshop Participants	2-2
Table 2-2	Observers	2-5
Table 2-3	Contractors	2-5
Table 2-4	Workshop Schedule	2-7
Table F-1	BPIS Mapped to Goals and Objectives	F-2

Executive Summary

The TO-BE Activity and Data Modeling Workshop convened on 12 April 1993. The workshop participants consisted of representatives from the Tri-Service Medical Logistics community. The purpose of the workshop was to use the business process improvements (BPIs), derived during the AS-IS activity and data modeling sessions, to develop the TO-BE Medical Logistics business environment. The Systems Research and Applications Corporation (SRA) facilitated the workshop using the prescribed corporate Information Management (cIM) methodology according to DoD Directive 8020.1-M.

The cIM methodology provides a structured forum for making objective business decisions. This approach facilitates the development of an implementation plan that validates recommendations for BPIs against established organization goals. The recommendations are described in terms of changes to the current business activities and data. The cIM approach required functional experts to define current activities and to specify ways in which these activities can be improved to provide Medical Logistics support more effectively and efficiently within DoD.

The TO-BE workshop began by reviewing the BPIs and the focus papers from the AS-IS Data Modeling and Activity Based Costing (ABC) Workshop. During the TO-BE workshop, the following internal logistics customer representatives gave presentations: pharmacy, nursing, and contingency hospitals. Additionally, presentations were given by the following external Government support and civilian organizations and agencies: the Defense Finance and Accounting Service (DFAS), Defense Personnel Support Center (DPSC), Composite Health Care System (CHCS), Logistics Management Institute (LMI), George Washington University, Miles Laboratory, Wang Laboratory, Wilford Hall Medical Center, Wright-Patterson Air Force Base Logistics Application of Automated Marking and Reading Symbols (LOGMARS), and Food and Drug Administration (FDA). The guest speaker synopses are in Appendix A. The objective of the presentations was to provide the workshop participants with information on the current and state-of-the-art Medical Logistics practices used in the Government and private sectors. Appendix A contains summaries of the presentations. Workshop participants validated the vision of the future Medical Logistics mission and identified the goals and objectives to accomplish that mission. Then they mapped the BPIs to the goals and objectives. Next they ranked the BPIs to identify those areas that would have a high payback or could be implemented with a minimum of delay. The participants reviewed the BPIs against the existing data model and identified additional entities and attributes to accommodate the improvements. The BPIs were then mapped to the AS-IS activity model in order to emphasize the areas for business improvements during the TO-BE activity modeling efforts. The workshop participants decomposed the AS-IS activity models further to obtain the level of detail necessary to derive Service differences in the processes. They analyzed the differences among the Services and identified a best practice for each case. The series of best practices was then integrated into the TO-BE activity model and validated. Throughout the workshop, additional BPIs were identified. The workshop participants wrote position papers for those BPIs that were outside the Medical Logistics scope (see Appendix G). They will be forwarded to the appropriate organization for action.

The results of this workshop provide the tools needed to progress to the next phase of this project. The next phase will include developing functional requirements documentation for an integrated Defense Medical Logistics Standard Support (DMLSS) system and will establish the future direction of DoD Medical Logistics through the use of the mission, goals, objectives, and the activity and data models included in this document.

This Page Intentionally Left Blank

Section 1 Introduction

1.1 Background

The corporate Information Management (cIM) Medical Logistics Subgroup was formed in March 1990 under the sponsorship of the Assistant Secretary of Defense, Health Affairs (ASD(HA)). The subgroup surveyed common business practices in the health care industry and identified potential areas for improvement in the Military Health Services System (MHSS). The subgroup prepared and submitted a Functional Economic Analysis (FEA) that was approved 17 December 1992 by the Medical Functional Steering Committee. The FEA focused on savings through reduced inventories, adoption of electronic commerce, and Just-In-Time (JIT) supply management. Based on the results from previous work, the Department of Defense (DoD) is testing prototype Prime Vendor contracts that should reduce inventories at Medical Treatment Facilities (MTFs). The Subgroup Specialty Teams for Equipment Management and Facilities Management met in March 1992 with work continuing intermittently through August 1992. In December 1992, the Proponent Steering Subcommittee proposed, and the Director of Medical Functional Integration Management (MFIM) approved, selection of a Functional Program Manager and an Automated Information System (AIS) Program Manager.

Following the release of the Department of Defense 8020.1-M Functional Process Improvements (Draft) in August 1992, a workshop was convened in January 1993 to bring previous work in line with Functional Program Management guidelines and to complete high level Integrated Computer-Aided Manufacturing Definition Language (IDEF) activity models. The 2-week workshop focused on Medical Logistics activities that are performed across the continuum of the MHSS mission. The workshop participants included representatives from the Tri-Service Medical Logistics community. Workshop participants validated many of the high level business process improvement (BPI) issues identified by the Medical Logistics Subgroup. Those issues were reorganized and incorporated into the Baseline/Scoping Workshop Report.

A workshop convened in February 1993 with the dual purpose of refining and modifying the existing decomposition diagram for Activity Based Costing (ABC) and creating a data model. The workshop subdivided into two groups: ABC and Data Modeling. The ABC Group modified and further decomposed the activity models, performed activity based costing, and identified potential BPIs. The Data Modeling Group created the AS-IS data model to provide the foundation for constructing the TO-BE models. As a result, the two work groups completed a two-volume report. Volume I contains the executive summary, introduction, project plan, activity models and analysis, and recommendations based on the workshop participants' findings. Volume II contains the AS-IS data model and its appropriate definitions and business rules. In addition, Volume II contains the legacy system matrix (mapping existing AIS support to Medical Logistics Activities) developed by the Data Modeling Group.

A new workshop convened in April 1993 to define the TO-BE business environment for Medical Logistics. Many of the members who participated in the ABC and Data Modeling Workshop combined to form the workshop participants for the TO-BE workshop. The tasks of the workshop included creating activity models and updating and expanding the AS-IS data model. The group used models created in the previous workshop extensively to alter and adapt, where necessary, the current business practices. The BPIs created and outlined in the AS-IS workshop were used as a

guide in determining what changes needed to be made. Information gathered in this workshop will be used as a foundation for developing the functional requirements for the future Defense Medical Logistics Standard Support (DMLSS) system recommended in the FEA.

1.2 Mission and Scope of Functional Activity

Medical Logistics supports the MHSS mission by providing timely resources to enhance health care delivery in peacetime and promote wartime readiness and sustainability. Medical Logistics operates within the scope of the MHSS by providing a comprehensive range of materiel, facilities, services, and information supporting the worldwide scope of MHSS operations. The mission of health care logistics is to provide support at the most reasonable cost to meet the mission objective of sustaining a total quality force.

1.3 TO-BE Modeling Workshop Mission

The mission of the TO-BE group was to refine, validate, and expand the current AS-IS activity models and data model by using the business process improvements recommended in the AS-IS workshop. Information gathered will provide a basis for developing functional requirements for the DMLSS.

1.4 Workshop Approach

The project began by reviewing and validating BPIs identified in the AS-IS workshop. Workshop participants compared and evaluated these BPIs using previously defined goals and objectives. They then restructured these goals and objectives as necessary in order to better describe the future of Medical Logistics. Next, they ranked the BPIs using various criteria in order to determine the order in which to address them; a complete discussion of this process is included in Section 5.2.1, and the actual rankings are presented in Appendix B.

When the ranking was completed, workshop participants developed position papers (see Appendix G) for those BPIs determined to be outside the scope of the Medical Logistics community. These position papers included recommendations that require official policy changes.

The workshop participants continued by reviewing and validating the data model that was created in the Medical Logistics Activity Based Costing and Data Modeling Workshop that began in February 1993. The review was based on addressing the identified BPIs; each BPI was compared against the data model to determine any changes in data requirements necessary to support the BPI. Critical issues and data entities identified during the AS-IS modeling sessions were also further examined. Based on this review, the group made appropriate revisions to the model. Additional entities and structures were also added to the model to further support a unified, consistent way of doing business.

As a result, workshop participants documented the TO-BE information requirements of Medical Logistics through developing an attributed data model with complete entity and attribute definitions.

The activity modeling portion of the workshop began by reviewing the models developed in the AS-IS workshop. The group used the BPIs to examine the models to identify the areas where further decomposition was necessary. Workshop participants divided into groups according to functional area in order to use time more efficiently. These functional areas included equipment, facilities, supplies, outsource, finances, and information. Each group was tasked to further decompose the necessary portions of the model. They evaluated the best practices of each Service. Then the functional area subgroups used these best practices as a foundation for sub-activity descriptions and further model decompositions. Workshop participants then reconvened to incorporate the functional areas into one model.

This Page Intentionally Left Blank

Section 2 Project Plan

2.1 Workshop Objectives

The workshop participants established the following workshop objectives:

- Identify and document additional business process issues;
- Formulate and prioritize potential BPIs, goals, and objectives;
- Develop a TO-BE activity model that addresses and resolves the dysfunction detailed in the issues;
- Develop a data model that captures the structure of the data required to support the TO-BE environment.

2.2 Workshop Scope

The scope of the Provide Medical Logistics Support model includes all the activities that are performed during Medical Logistics operations. For the purpose of this workshop, administrative support functions such as general military and civilian personnel training, conducting annual performance evaluations on military and civilian personnel, and general administrative programs are considered outside the scope of the models.

2.3 Critical Success Factors

The workshop participants determined that the following factors were the most critical to achieving the mission and objectives:

- Recommendations must be practical and achievable.
- Workshop products must represent consensus among workshop participants.
- Workshop products must go through a quality assurance review before publication.
- Participation of all workshop participants is essential.

2.4 Medical Logistics Workshop Participants

A listing of participants in the workshop is provided in Tables 2-1 through 2-3 by category.

Table 2-1. Workshop Participants

Workshop Participants			
Name	Organization	Mailing Address	Phone
Edwin Abeya	Sherikon, Inc. Navy representative	MFIM (Sherikon, Inc.) 5205 Leesburg Pike One Skyline Place Suite 1000 Falls Church, VA 22041	(703) 756-5611
James Alexander	Sherikon, Inc. Army representative	Sherikon, Inc. 92 Thomas Johnson Drive Suite 130 Frederick, MD 21710	(301) 698-2686
Tony Barriere	Naval Medical Logistics	Naval Medical Logistics Command Fort Detrick Code 3 Frederick, MD 21702	(201) 619-7247
LT Bob Beam	Irwin Army Hospital	Irwin Army Hospital Attn: HSXX-LD, Bldg 600 Fort Riley, KS 66442-5037	(913) 239-7439
LCDR Chuck Bird	Defense Medical Standardization Board Navy representative	Defense Medical Standardization Board Building 1423, Room 157 Fort Detrick Frederick, MD 21702	(301) 619-2186
1LT Chrishopher Blum	Air Force (AF) Medical Logistics Office	AF Medlog Office/FOM Fort Detrick Frederick, MD 21702	(301) 619-7487
MSGT John Cadena	AF Medical Logistics Office	AF Medlog Office/FOM Fort Detrick Frederick, MD 21702	(301) 619-7487
LTC John Clarke	Defense Medical Systems Support Center (DMSSC)	DMSSC Six Skyline Place, Suite 508 Leesburg Pike Falls Church, VA 22041	(703) 756-8794
LT Mitch Cooper	DPSC/ME	DPSC/ME 2800 South 20th Street Philadelphia, PA 19101	(215) 737-5758

MAJ William Dorr	United States Army Medical Materiel Agency (USAMMA)	USAF Medical Center/SGLF Wright Patterson AFB Dayton, OH 45440	(513) 257-6343
LTC Garry Duvall	MFIM	MFIM 5205 Leesburg Pike One Skyline Place Suite 1000 Falls Church, VA 22041	(703) 756-5611
SSGT Derrick Edwards		108 Grimes Court Mount Airy, MD 21771	No phone until July
Pam Fowler	USA Health Care Systems Support Activity	USA Health Care Systems Support Activity ATTN: HS-SS Greenway Park 2455 Northeast Loop 410 Suite 150 San Antonio, TX 78217	(210) 221-9771 x346
Jim Gollogly	Sherikon, Inc.	MFIM (Sherikon, Inc.) 5205 Leesburg Pike One Skyline Place Suite 1000 Falls Church, VA 22041	(703) 756-5611
James Holland	AF Medical Logistics Office Defense Business Operations Funds (DBOF)	AF Medlog Office/FOS Medical-Dental DBOF Fort Detrick Frederick, Md 21701-5006	(301) 619-2137
MSGT Paula Hughes	Eglin AFB Hospital	P.O. Box 1276 Frederick, MD 21702 USAF Regional Hospital Eglin/SGL Eglin AF Base, FL 32542	(904) 882-7351
COL Michael Jiru	MFIM	MFIM 5205 Leesburg Pike One Skyline Place Suite 1000 Falls Church, VA 22041	(703) 756-5611
Thomas M. Judd	LCDR/USNR	Kaiser Permanente 3355 Lenox Road N.E. Suite 1000 Atlanta, GA 30326	(404) 365-4240

LT John Knotts	Naval Healthcare Support Office	Naval Healthcare Support Office 6500 Hampton Blvd. Norfolk, VA 23508-1297	(804) 398-7400
MAJ Thom Kurnel	USA Health Care Facility Planning Agency	USA Health Care Facility Planning Agency 5109 Leesburg Pike Suite 679 Falls Church, VA 22041	(703) 756-8240
Linda Noel	National Naval Medical Center	National Naval Medical Center 8901 Wisconsin Avenue Attn: Procurement Department Building 54 Bethesda, MD 20889-5600	(301) 295-0304
LCDR Larry Phillips	Naval Healthcare Support Office, Jacksonville	Naval Healthcare Support Office Box 140 Jacksonville, FL 32212-0140	(904) 777-7948
LTC Harvey Sietsema	MFIM	MFIM 5205 Leesburg Pike One Skyline Place Suite 1000 Falls Church, VA 22041	(703) 756-5611
Rob Spear	VW International Army Representative	VW International Suite 420 6911 Richmond Hwy Alexandria, VA 22306	(703) 768-6265
Capt R.D. Tackitt	MFIM	MFIM One Skyline Place, Ste 1001 Falls Church, VA 22041	(703) 756-5611
Ron Thibodeau	Sherikon, Inc. Navy Representative	MFIM (Sherikon, Inc.) 5105 Leesburg Pike One Skyline Place Falls Church, VA 22041	(703) 756-5611
W01 Daniel Thompson	USAMMA Maintenance Directorate	USA Medical Materiel Agency Fort Detrick Frederick, MD 21702	(301) 619-4383

Terry Tracy	Sherikon, Inc. Navy Representative	MFIM One Skyline Place Falls Church, VA 22041	(703) 756-5611
Dave Via	AF Medical Logistics Office DBOF	AF Medlog Office/FOS Medical-Dental DBOF Fort Detrick Frederick, MD 21701-5006	(301) 619-2137
LT Lisa Ziemke	Naval Medical Information Management Center	Naval Medical Information Management Center Code 21 - Project Management Bethesda, MD 20708-5066	(301) 295-1940

Table 2-2. Observers

OBSERVERS			
Name	Organization	Mailing Address	Phone
Alan McAdams	EDS	EDS 1600 N Beauregard Alexandria, VA 22311	(703) 578-5434
Ilana Rappaport	EDS	EDS 1600 N Beauregard Alexandria, VA 22311	(703) 578-5434

Table 2-3. Contractors

CONTRACTORS			
Name	Organization	Mailing Address	Phone
Bob Berger Senior Medical Functional Analyst	Advanced Systems Development	ASD 2800 Shirlington Road Alexandria, VA 22206	(703) 824-4400
Rick Bevilacqua Senior Facilitator	New England Business Consultants	63 Elm Street Muthen, Mass	(508) 794-0375
Jennifer Borden Modeling Technician	SRA Corporation	SRA 2000 15th Street North Arlington, VA 22201	(703) 824-4400

Pat Coville Asst. Project Manager	SRA Corporation	SRA 2000 15th Street North Arlington, VA 22201	(703) 824-4400
Michele Gay Modeling Technician	SRA Corporation	SRA 2000 15th Street North Arlington, VA 22201	(703) 824-4400
Gaynell Fritz Systems Analyst	SRA Corporation	SRA 2000 15th Street North Arlington, VA 22201	(703) 824-4400
Christine Kanapesky Modeling Technician	Coopers & Lybrand	1530 Wilson Boulevard Arlington, VA 22209	(703) 824-4400
Janet Murray Senior Facilitator	SRA Corporation	SRA 2000 15th Street North Arlington, VA 22201	(703) 824-4400
Charlie Orr Senior Facilitator	SRA Corporation	SRA 2000 15th Street North Arlington, VA 22201	(703) 824-4400
Bill Regno Technical Lead	SRA Corporation	SRA 2000 15th Street North Arlington, VA 22201	(703) 824-4400
Chuck Rounds Project Manager	SRA Corporation	SRA 2000 15th Street North Arlington, VA 22201	(703) 824-4400
Stefania Schweigert Facilitator	SRA Corporation	SRA 2000 15th Street North Arlington, VA 22201	(703) 824-4400
Rick Van Huysen Senior Facilitator	New England Business Consultants	11286 Cherrylon Dr Brighton, Michigan 48116	(313) 262-3014

2.5 Workshop Schedule

Table 2-4 lists the schedule of workshop activities.

Table 2-4. Workshop Schedule

Activity	April			May				June		
	12-16	19-23	26-30	3-7	10-14	17-21	24-28	31-4	7-11	14-18
Define scope of TO-BE business	✓									
Validate/Define goals and objectives of TO-BE business	✓	✓	✓							
Analyze and rank Business Process Improvements (BPIs)	✓	✓	✓		✓					
Evolve TO-BE data model by identifying changes in AS-IS data model to incorporate BPIs, objectives, and goals		✓	✓		✓					
Resolve issues identified in AS-IS data modeling workshop		✓	✓		✓	✓	✓	✓	✓	
Map BPIs/metrics to AS-IS activity model						✓	✓			
Decompose selected high payback areas							✓	✓	✓	
Resolve Finance and Service Activities								✓	✓	
Identify differences in Army/Navy/Air Force processes						✓	✓	✓	✓	
Identify changes in AS-IS decompositions to fix problems/opportunities						✓	✓	✓	✓	
Determine impact of changes to other parts of model								✓	✓	
Complete Final Documentation										✓

This Page Intentionally Left Blank

Section 3

Activity Models

3.1 Activity Modeling Techniques

Modeling is a structured, analytical method of studying and documenting activities. Modeling employs a language, or syntax, to document business processes and data in a structured format.

The Integrated Computer-Aided Manufacturing Definition Language (IDEF) modeling techniques employed during this project were originally developed by the U.S. Air Force with contractor support and are, therefore, in the public domain. IDEF is used widely throughout Government and private industry, and has proven to be an effective tool to aid in management and requirements definition.

Activity models (IDEF0) are used to aid in analysis and documentation of the business processes. Information flows and roles are defined (e.g., inputs, controls, and outputs) for each activity or sub-activity. Additionally, the systems, people, and equipment that perform the activities (mechanisms) are identified as part of the process.

3.2 Introduction to Activity Models

An activity model is a graphic representation of the business functions within the enterprise. The model depicts the work or activities performed in a business area. An activity is depicted as a rectangular box, and represents a process, action, or task that is accomplished over a period of time. It has a name, which is shown as a single action verb with a single explicit object that describes the process, action, or task that an activity represents. An activity will transform a set of inputs into products, enabled by resources, and constrained by a set of controls.

Team members develop the activity models from their collective knowledge about the process during facilitated sessions. They may interview subject matter experts in areas the team determines are outside of their collective expertise. They may also gain knowledge and insight into the processes through any available materials such as documents, forms, procedures and existing activity models. The scope, purpose, and viewpoint are boundaries that help the modelers determine what is relevant for inclusion in the model.

An activity model has three components:

- Node Tree(s)
- Context Diagram
- Decomposition Diagrams.

3.3 Node Tree Diagrams

Node tree diagrams are used to portray activities in a hierarchical format. Each activity is represented by a dot. The complex activity that entails the scope of the activity model is placed above its component subactivities, with lines connecting the top node to each subactivity node. The sum of the subactivities equals the whole of the activity. The node tree is analogous to a work

breakdown structure. The component nodes may be further decomposed into their sub-components, until the modelers feel that they have adequately represented the required activity breakdown. Each node is labeled with the name of the activity or subactivity it represents, with an additional identifier consisting of a letter followed by one or more numerals. A node tree diagram is often thought of as a table of contents for the activity model. As such, it depicts the breadth of the business area being modeled and the depth of the modeling effort.

3.4 Context Diagrams

The complex activity represented in the context diagram is equivalent to the topmost activity node in the node tree diagram. A context diagram (see Figure 3-1) consists of a single activity box and its related inputs, outputs, controls, and mechanisms (ICOMs). The context diagram establishes the scope of the process being modeled. ICOMs are used to represent information or materials used in or produced by an activity, and data or objects involved in an activity. The ICOM names or labels are nouns and noun phrases. An ICOM has four possible roles relative to an activity:

- a. **Input.** Information or materials that are transformed or consumed in producing the outputs of an activity. (Arrow entering left side of an activity box.)
- b. **Control.** Information or materials that govern, constrain, or trigger the operation of an activity. Control regulates the transformation of inputs to outputs. (Arrow entering top of an activity box.)
- c. **Output.** Information or materials that are produced by an activity or result from an activity. (Arrow leaving right side of an activity box.)
- d. **Mechanism.** People, machines, resources, or systems that perform (enable) an activity, or provide energy to an activity. (Arrow entering bottom of an activity box.)

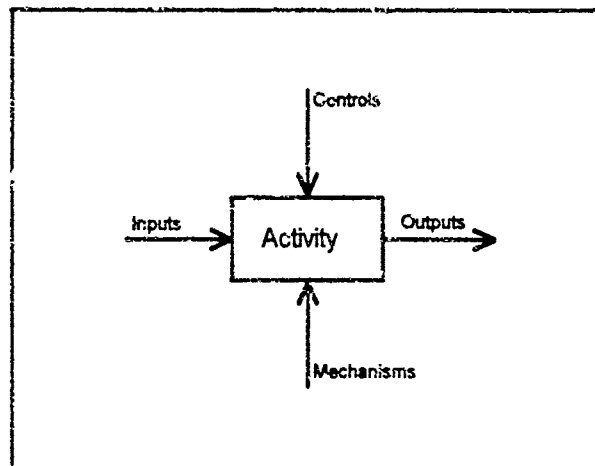


Figure 3-1 IDEF0 Activity Box and ICOM Arrows

3.5 Decomposition Diagrams

A decomposition diagram describes the details of an activity and the relationships between the activities in a decomposition level. In the decomposition process, the modelers break down an activity by determining its subactivities. The ICOMs that interact with the activities are depicted, documenting the activity associations and the roles of data within the process. Unlike a node tree, which can show several levels of sub-component activities at once, a decomposition diagram shows only one level of the subactivities. Each decomposition diagram further details the component

activities of its parent activity. The activity modelers check to ensure that the activity views are consistent from one level to the next.

3.6 Medical Logistics Node Tree

The node trees produced in the workshop — shown on pages 3-5 through 3-11 — represent the scope of the activities being modeled by this group. Each node or dot on the diagrams represents a significant activity, and each line represents a decomposition relationship between the activities.

3.7 Medical Logistics Activity Models

The AS-IS Medical Logistics Activity Models, which were developed during the Activity Based Costing and Data Modeling Workshop conducted from 1 February through 2 April 1993, were used as the framework for developing the TO-BE Medical Logistics Activity Models. The TO-BE models represent the consensus of the workshop participants on how Medical Logistics business should be conducted in the future. Since representatives of the Army, Navy, and Air Force actively participated in developing these models, the resulting product is an appropriate candidate to be used as a foundation for developing future DoD-wide integrated business practices and subsequently an AIS to support those business practices.

The Provide Medical Logistics Support context diagram (A-0) displayed on page 3-13 reflects the highest level of the processes examined in this workshop. It illustrates the major ICOMs involved in the business of providing Medical Logistics support.

The decomposition diagrams that follow on pages 3-14 through 3-89 represent the subactivities associated with providing Medical Logistics support. Text summaries of each diagram can be found on the page opposite each model. Activity descriptions are included in Section 3.8; ICOM definitions are provided in Section 3.9.

The TO-BE Activity Modeling session began, as a single group, with a review and discussion of the AS-IS models, definitions, goals and objectives, BPIs, and approach for developing the TO-BE models. The group ranked the BPIs and mapped them to goals and objectives. Appendix E identifies the goals and objectives. After considerable discussions and analysis of the business process improvements, goals, and objectives, the group divided into three subgroups: Supply, Equipment, and Facilities. Later in the workshop, three additional subgroups were formed to address Outsource /acquisitions, Manage Information, and Management of Funds.

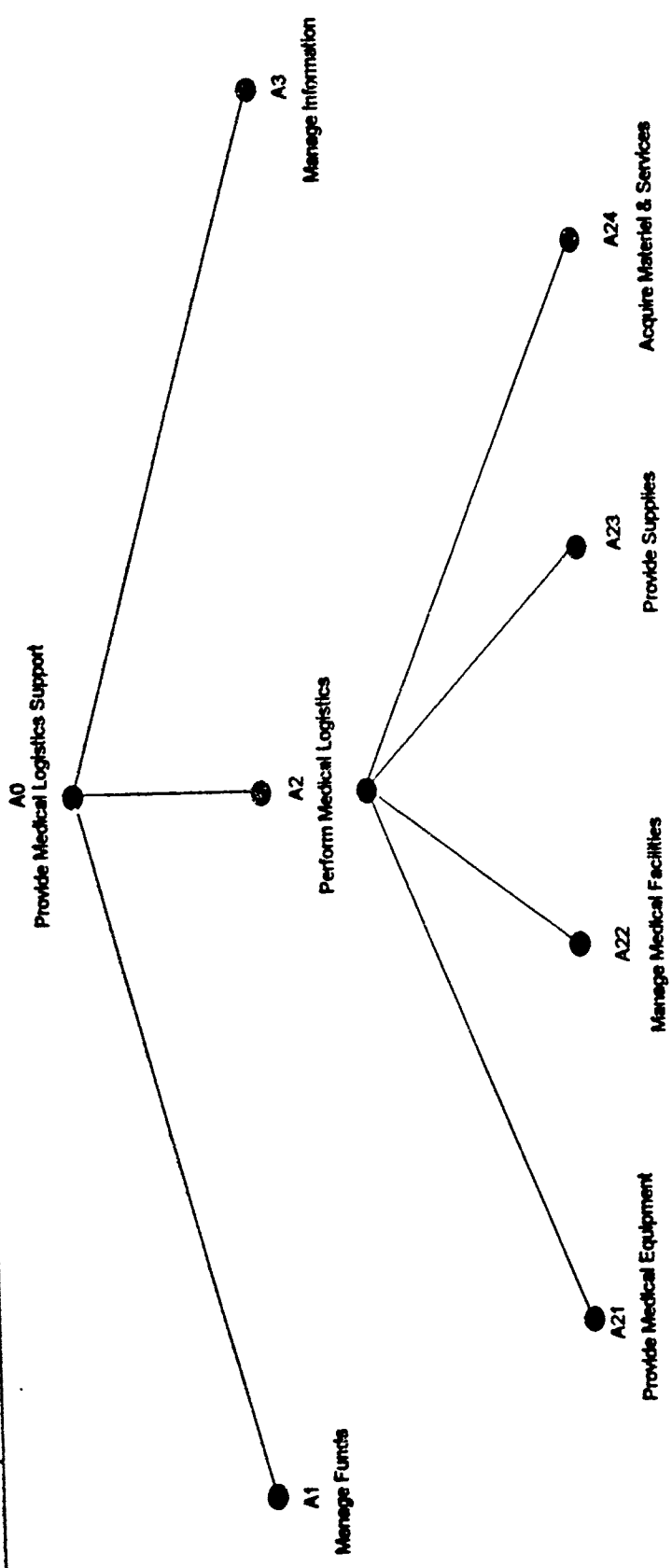
Each of the subgroups used the following approach in developing the TO-BE models:

- a. Although it was understood that differences exist in the way the Services perform Medical Logistics functions, the AS-IS models had not been decomposed to a level where these differences were displayed. Participants further decomposed the AS-IS models so that these differences could be easily identified and to enhance the visibility of improvement opportunities.
- b. Next, the subgroups mapped the BPIs — identified during the AS-IS workshop and new ones developed in the TO-BE workshop — to the existing models to ensure that

refinements in the activities constituting Medical Logistics Support reflected the desired improvements. Participants discovered that some of the desired improvements could not be implemented within a Medical Logistics system and required action by some other agency or higher authority to implement via policy changes. They addressed these improvements in position papers to be staffed by MFIM. Appendix G contains the position papers addressing these improvements.

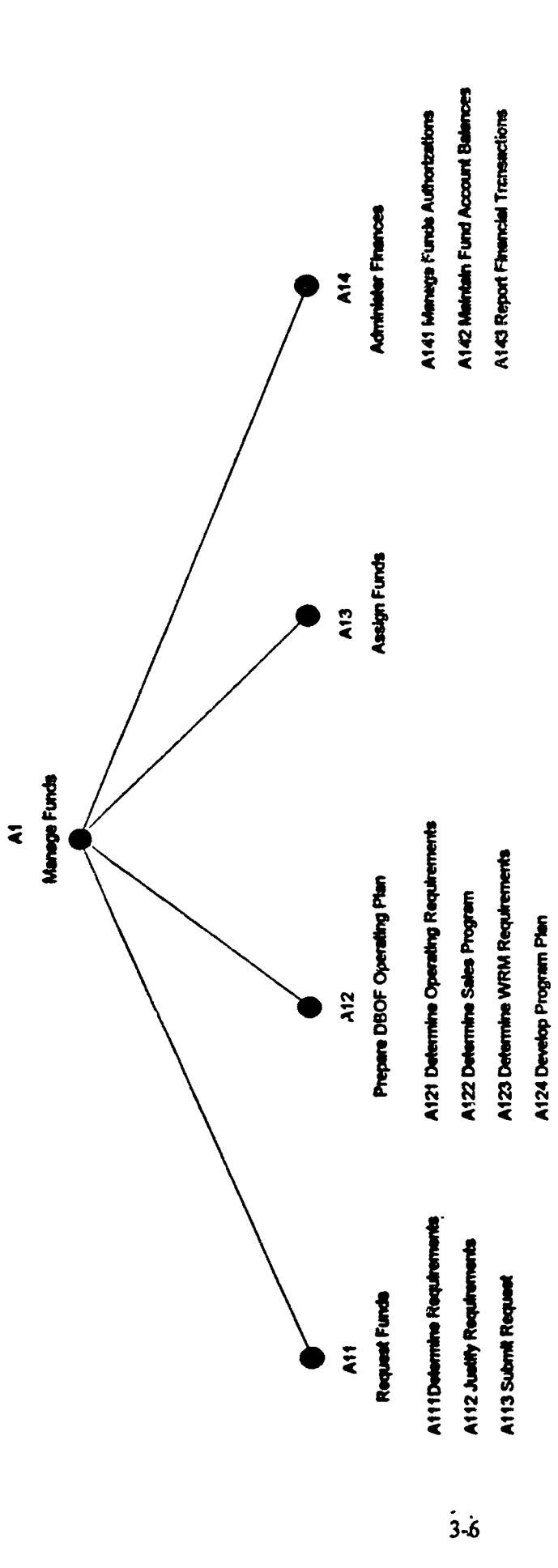
- c. After mapping the improvements to existing models, the subgroups reviewed each of the goals and objectives to ensure that they could be attained and measured by implementing the BPIs.
- d. Actual development of the TO-BE models began with further refinement of the AS-IS models and elimination of the duplicate methods of performing the same activities. To accomplish this, the Services' representatives reached a consensus that no critical activities were eliminated or omitted.
- e. The group reviewed each Activity, Input, Control, Output, and Mechanism for appropriateness and defined them so that they accurately represented their application in the new models. The TO-BE model was decomposed to varying levels in order to identify the details being performed in each functional area. This decomposition assured unanimity among the Services and allowed participants to identify and review all specifics of providing medical logistics support. As they refined the models, they again reviewed and revised the affected definitions as necessary.
- f. Upon completion of the individual subgroup efforts, the single group reconvened to review each of the models. Their purpose was to eliminate redundancy and merge the models at the appropriate points. They reviewed the overall Medical Logistics model to ensure that the model was depicting one system that would accommodate all elements of Providing Medical Logistics Support.

USED AT:	AUTHOR:	MEDLOG	DATE:	07/01/99	WORKING	DATE:	07/01/99
	PROJECT:	MEDLOG TO-BE Workshop	REV:		DRAFT		
	NOTES:	1 2 3 4 5 6 7 8 9 10			RECOMMENDED		
					PUBLICATION		



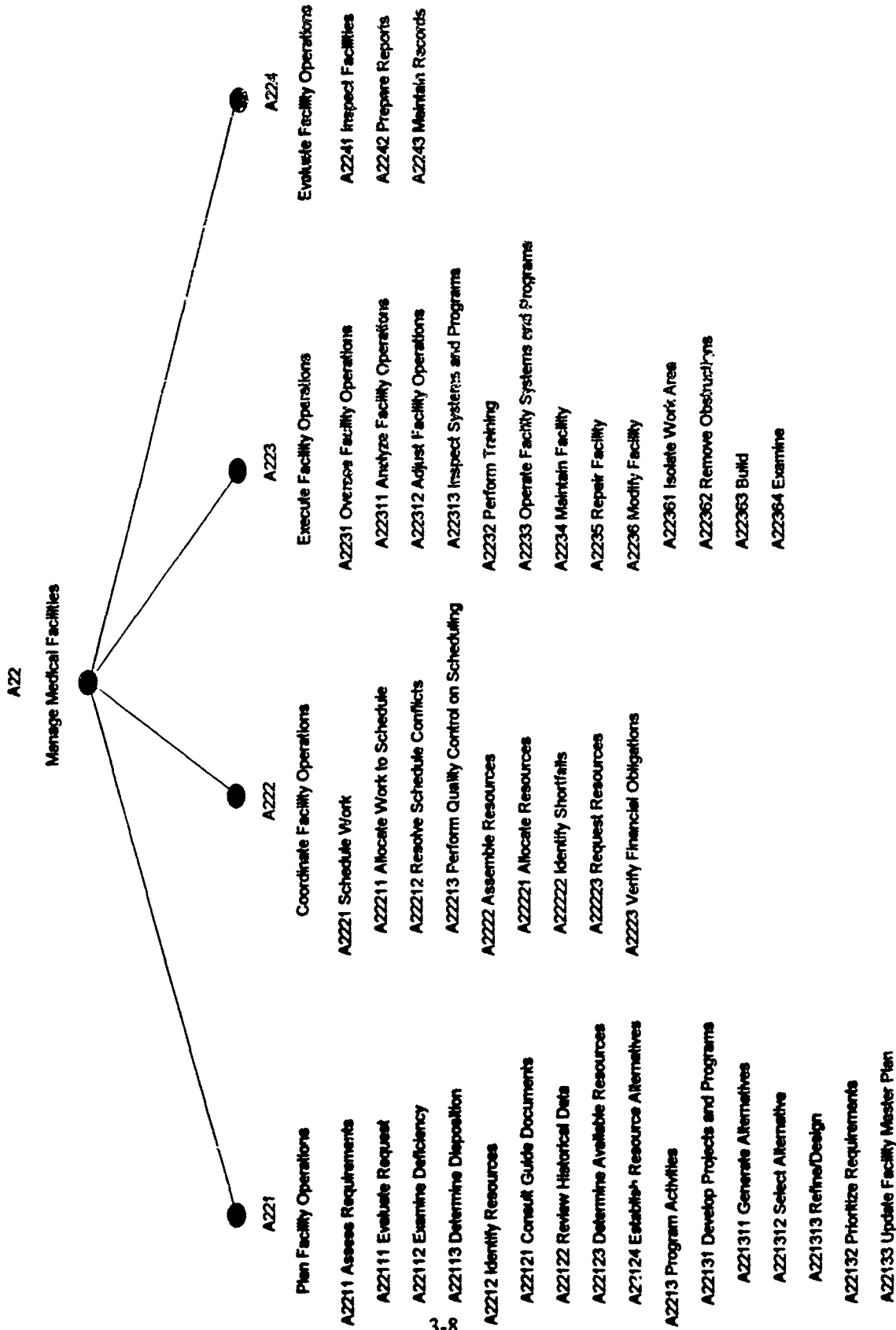
CODE:	Text	TITLE:	NUMBER:
-------	------	--------	---------

USED AT:	AUTHOR: MEDLOG	DATE: 07/01/83	WORKING	READER	DATE	CONTEXT:
PROJECT: MEDLOG TO-BE Workshop	REV:		DRAFT			Top
NOTES: 1 2 3 4 5 6 7 8 9 10			RECOMMENDED			
			PUBLICATION			



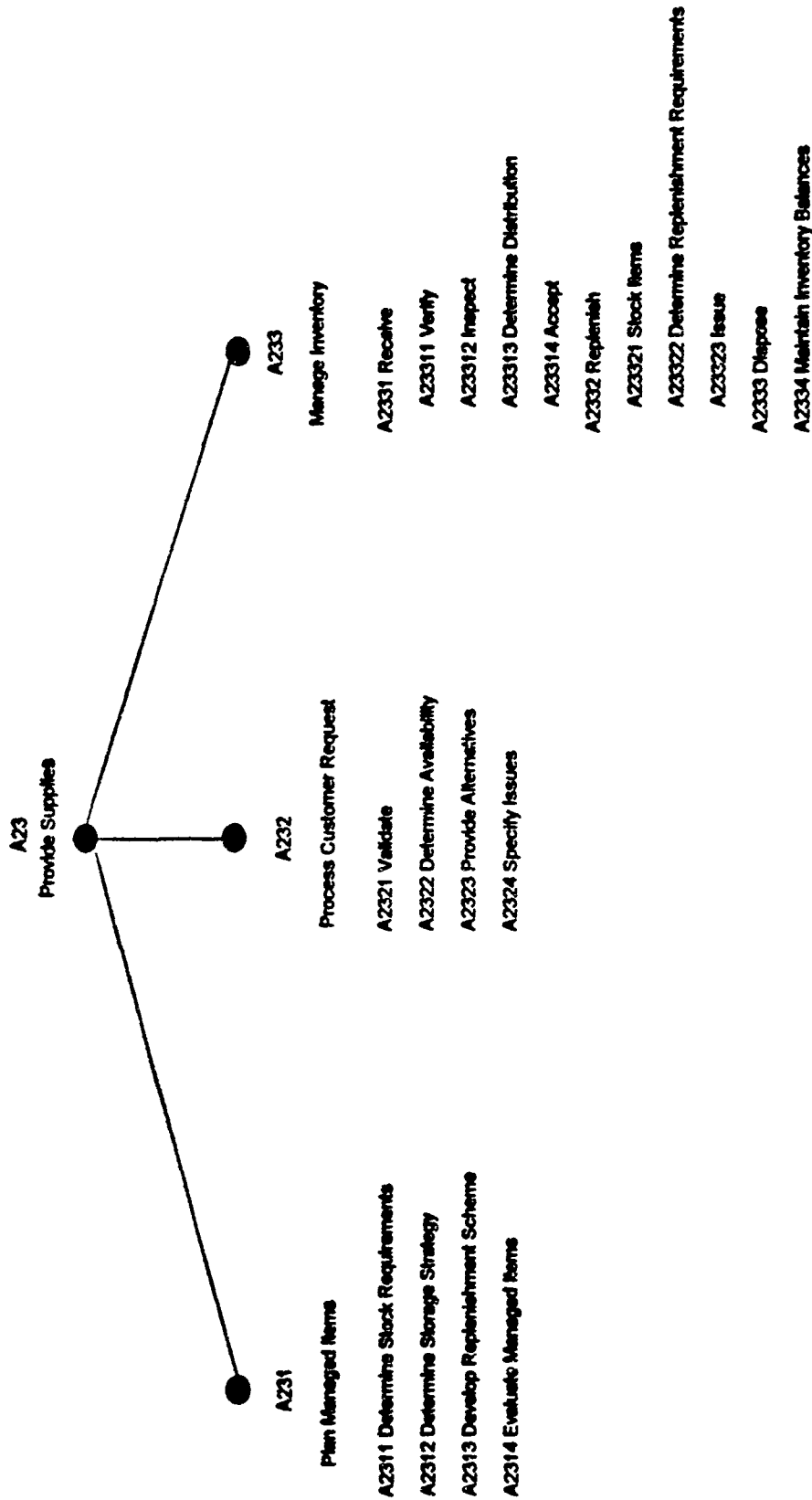
ODE: Text	TITLE:	NUMBER:
-----------	--------	---------

USED AT:	AUTHOR:	MEDLOG	DATE: 07/01/83	WORKING	READER	DATE	CONTEXT:
	PROJECT:	MEDLOG TO-BE Workshop	REV:	DRAFT			Top
	NOTES:	1 2 3 4 5 6 7 8 9 10		RECOMMENDED			
				PUBLICATION			



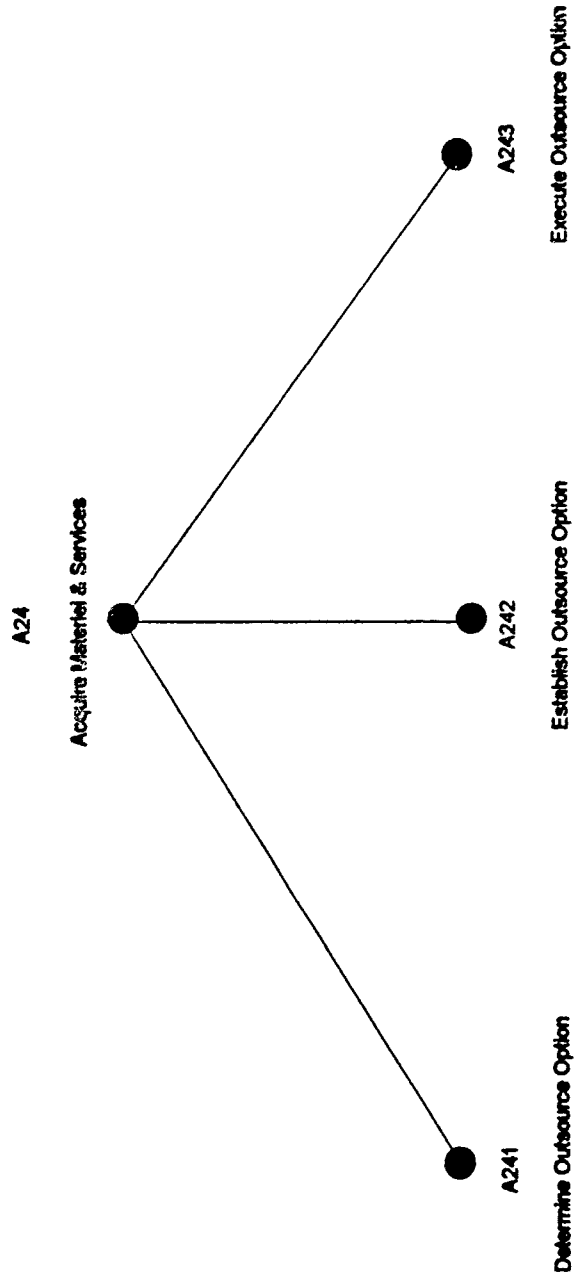
ODE: Text	TITLE:	NUMBER:
-----------	--------	---------

USED A.I.	APPROVOR.	MEDLOG	DATE	WO	NG	DATE	EXTENSION
PROJECT:	MEDLOG TO-BE Workshop	REV:	1/01/				
NOTES:	1 2 3 4 5 6 7 8 9 10			DRAFT			Top
				RECOMMENDED			
				PUBLICATION			



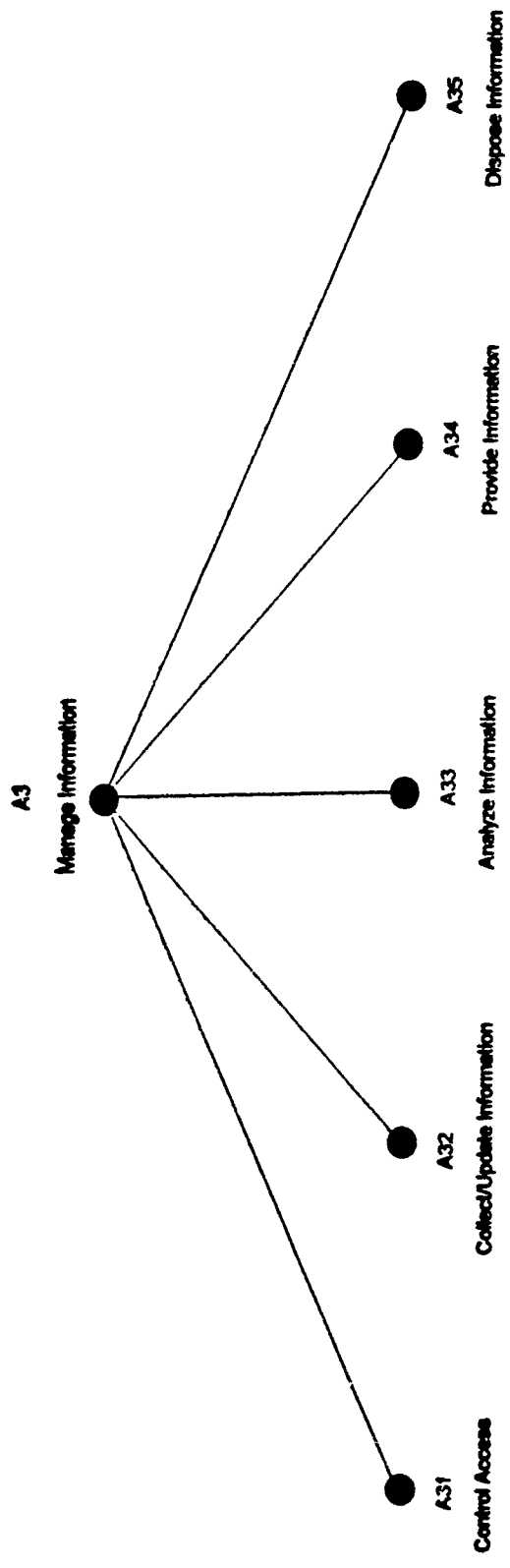
ODE: Text	TITLE:	NUMBER:
-----------	--------	---------

USED AT:	AUTHOR:	MEDLOG	DATE: 07/02/93	WORKING	READER	DATE	CONTEXT:
	PROJECT:	MEDLOG TO-BE Workshop	REV:	DRAFT			Top
	NOTES: 1 2 3 4 5 6 7 8 9 10			RECOMMENDED			
				PUBLICATION			



ODE: Text	TITLE:	NUMBER:
-----------	--------	---------

USED AT:	AUTHOR:	MEDLOG	DATE:	07/01/93	WORKING	READER	DATE	CONTEXT:
	PROJECT:	MEDLOG TO-BE Workshop	REV:		DRAFT			Top
	NOTES:	1 2 3 4 5 6 7 8 9 10			RECOMMENDED			
					PUBLICATION			



ODE: Text	TITLE:	NUMBER:
-----------	--------	---------

This page intentionally left blank.

USED ALL	NO. HOA: MEDLOG	JATL. 07/01/93	WORKING	READER	DATE	CONTEXT
PROJECT: MEDLOG TO BE Workshop	REV:		DRAFT			Top
NOTES: 1 2 3 4 5 6 7 8 9 10			RECOMMENDED			
			PUBLICATION			

Laws, Directives, Policies

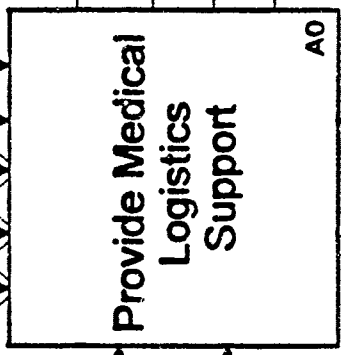
Medical Market/Technology

Plans & Missions

Clinical Guidance

Fiscal Guidance

(A) (A) (A) (A)



Customer Requirements

Material & Facilities

Customer Support Information

Mission-Ready Materiel

Mission-Ready Facility

Support Services

Logistics Resources

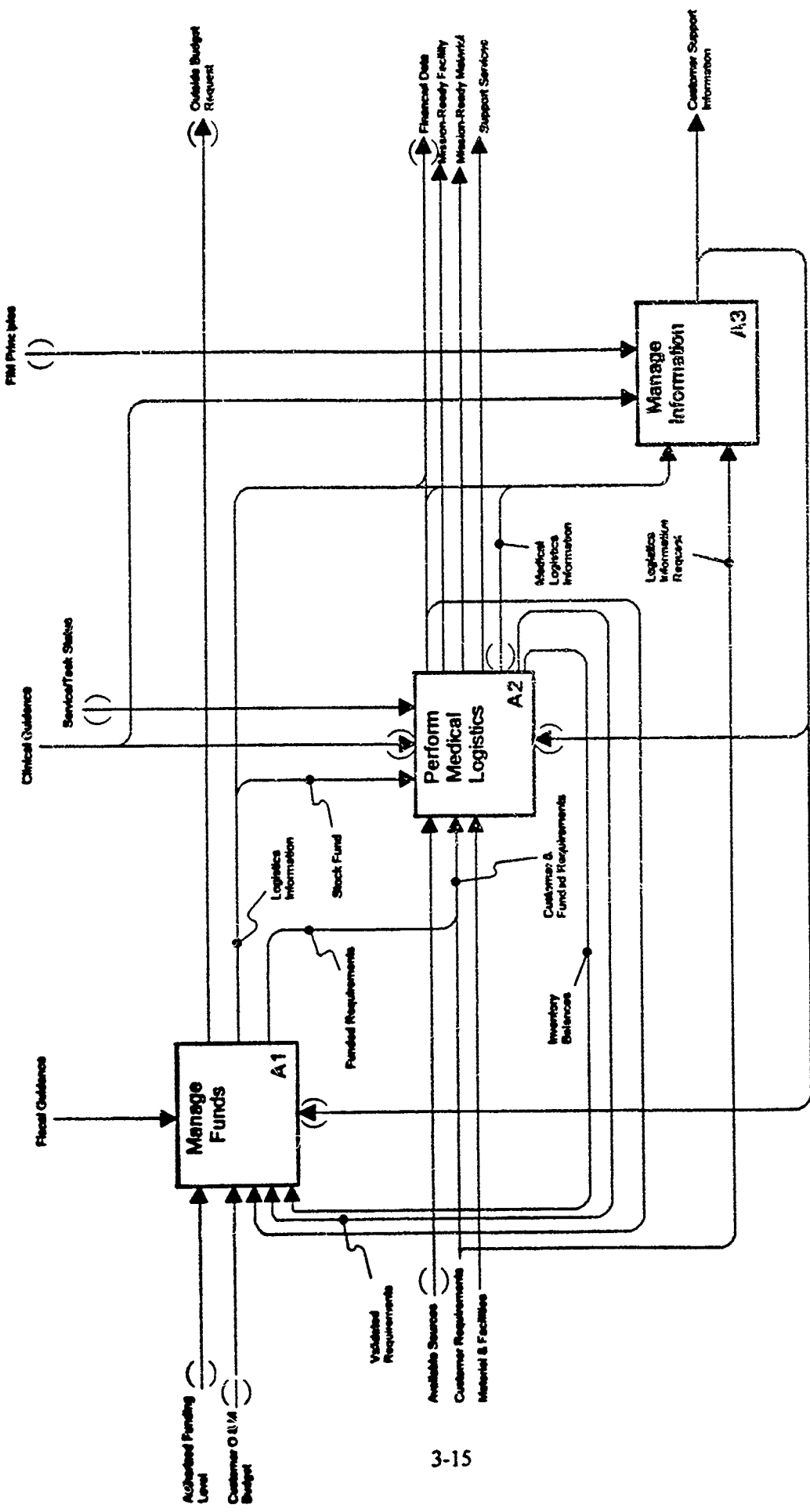
DMLSS

ODE: A-0	TITLE: Provide Medical Logistics Support	NUMBER:
----------	--	---------

A0 Provide Medical Logistics Support

Provide medical logistics support encompasses the processes performed within medical logistics to support health care delivery. After determining the amount of funds necessary, a budget is submitted based on funding requirements, treatment history, and fiscal guidance. Once authorized funding levels are received, the required materiel, services, and facilities are obtained and maintained. When funded customer requirements are received, they are processed and satisfied with existing assets. If such assets are unavailable, a request is generated to acquire them from outside medical logistics. The acquisition of such requirements is facilitated by logistics resources and is regulated by laws and directives, medical market/technology, plans and missions, clinical guidance, and fiscal guidance. The myriad of financial and logistical information that is generated in the submission/execution of budget and acquisition of materiel and services is continually reviewed, assessed and analyzed to ensure that providing medical logistics support is performed in the most efficient manner.

USED AT:	AUTHOR: MEDLOG	DATE: 07/01/83	WORKING	READER	DATE
PROJECT: MEDLOG TO-BE Workshop	REV:		DRAFT		
NOTES: 1 2 3 4 5 6 7 8 9 10			RECOMMENDED		
			PUBLICATION		



ODE: A0	TITLE: Provide Medical Logistics Support	NUMBER:
---------	--	---------

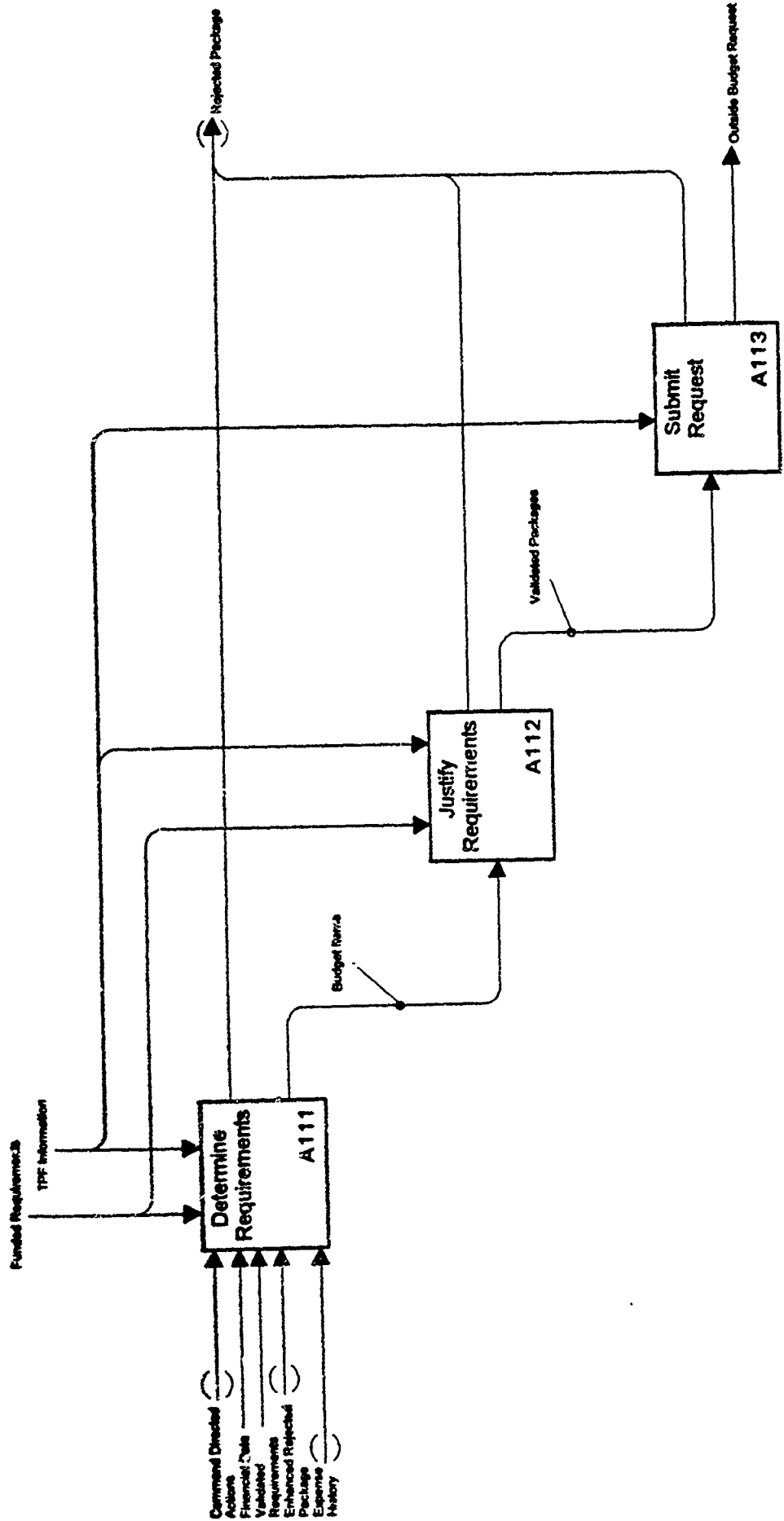
A1 Manage Funds

Manage funds includes the activities of the Logistics community in requesting necessary Operations and Maintenance (O&M) funds to conduct the logistics business, requesting Defense Business Operations Funds (DBOF) to maintain the revolving operations, managing O&M funds belonging to the customers, and assigning available funds to documents upon issue of materiel. As validated requirements are received, accounting classifications or appropriations are added to determine funding requirements. Some requirements may be rejected if information is missing. Validated packages are aggregated in an outside budget request and submitted through the appropriate comptroller channels. To maintain the revolving funds for operating medical logistics the following activities occur: Inventory balances provide a stratification of the inventory levels, the customer's O&M budget submission for medical supplies and medical expense equipment provides the planned sales program for the fiscal year, and a review of the war plans and operations plans provides the war reserve materiel levels to be supported. An execution operating plan is produced to provide for monthly obligation and inventory targets. Validated unfunded requirements are matched with available funds. Funds are either assigned for obligation or the requirement is rejected as a shortfall for a new budget submission. Financial data are received from all logistic activities and are used to update sales reports, obligation reports, and to provide information or funding for customers. A complete interface to the Standard Accounting and Finance Office is made to provide for stratification of inventory, for Stock Fund General Ledger and General Funds General Ledger updates, and for Trial Balance reporting. For sales from the DBOF, a surcharge on local purchases is added to every issue transaction and the balances separately maintained in the fund account.

A11 Request Funds

Request Funds involves determining, justifying, and submitting funding resource requirements within the DoD. Accounting classifications or appropriations are added to determine individual funding requirements. Narrative descriptions are used to support the total requirement in each accounting classification. Customer requirements that are not sufficiently justified or missing information are rejected. After further justification by the customer, a rejected package may be resubmitted as an enhanced rejected package. Validated requirements are aggregated in an outside budget request and submitted through the appropriate comptroller channels. Requested funds may consist of Operations and Maintenance (O&M) funds (including Real Property Maintenance Activity (RPMA) fund), Defense Business Operations Fund (DBOF), Military Pay, Other Procurement, and Military Construction (MILCON) appropriations. This activity produces items awaiting receipt of funds for assignment.

NOTES: 1 2 3 4 5 6 7 8 9 10



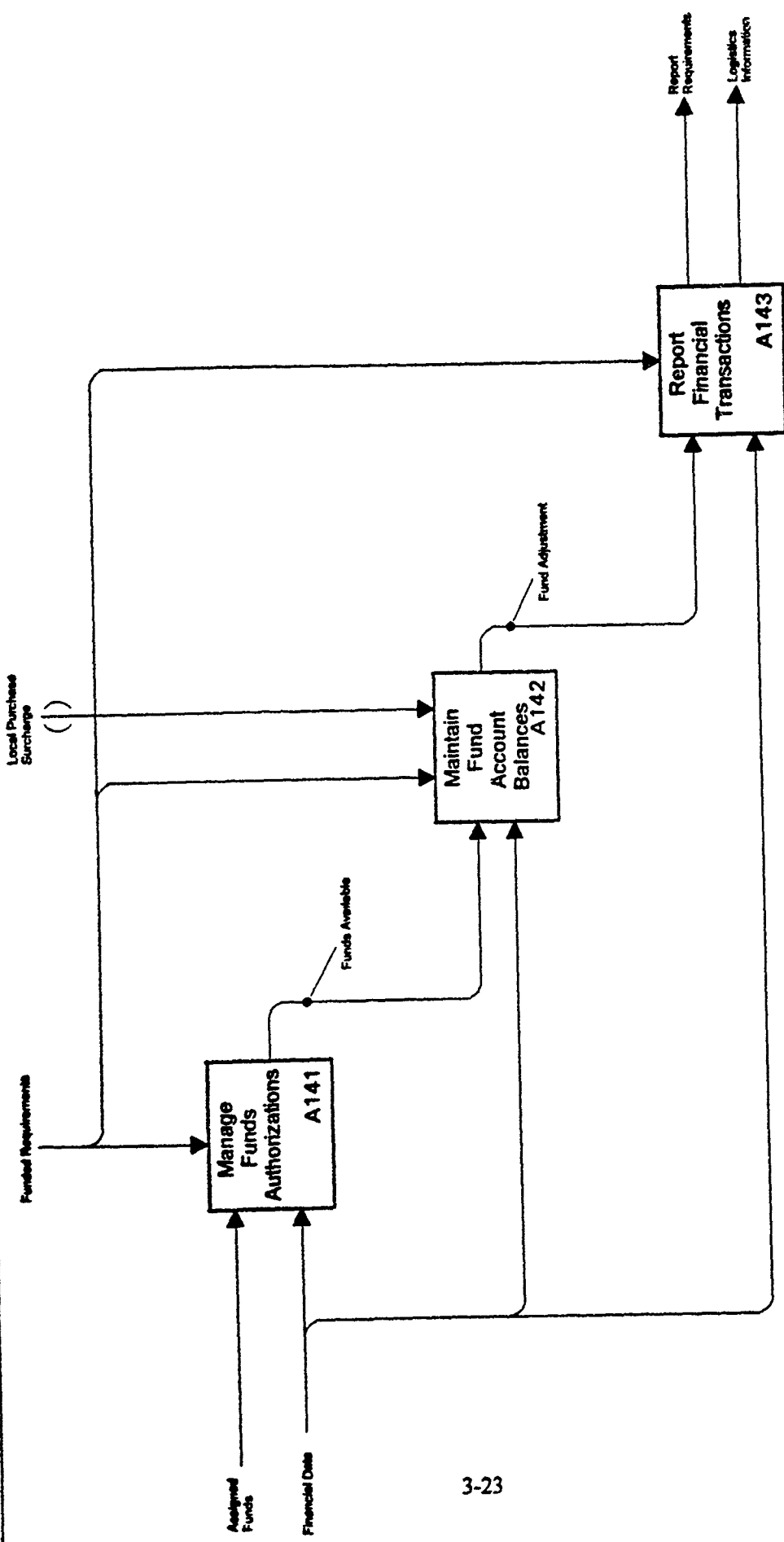
A12 Prepare DBOF Operating Plan

Prepare DBOF Operating Plan is the methodology for determining inventory targets and sales programs for the production of a Defense Business Operations Fund Operating Plan. The dollar value of the on-hand inventory is produced using the DoD Secondary Item Stratification Report. This report displays the current value of inventory — on-hand and stock control level — stratified as the stock control levels are calculated. Separate calculations are provided for operating inventory that is for use during the order ship time, the economic order quantity period, and the safety level period. This provides ending inventory positions. Customers' anticipated sales programs are obtained from the financial resource manager. Assigned War Reserve Materiel (WRM) missions are determined from war plans, operational plans, and information received from the Food and Drug Administration drug extension program. This produces the ending inventory requirements, the WRM requirements, and the sales program that must be supported. Applying available assets towards these requirements produces an obligations program. An Operating Plan can be prepared to execute the sales program, purchase WRM items, and manage inventory.



A14 Administer Finances

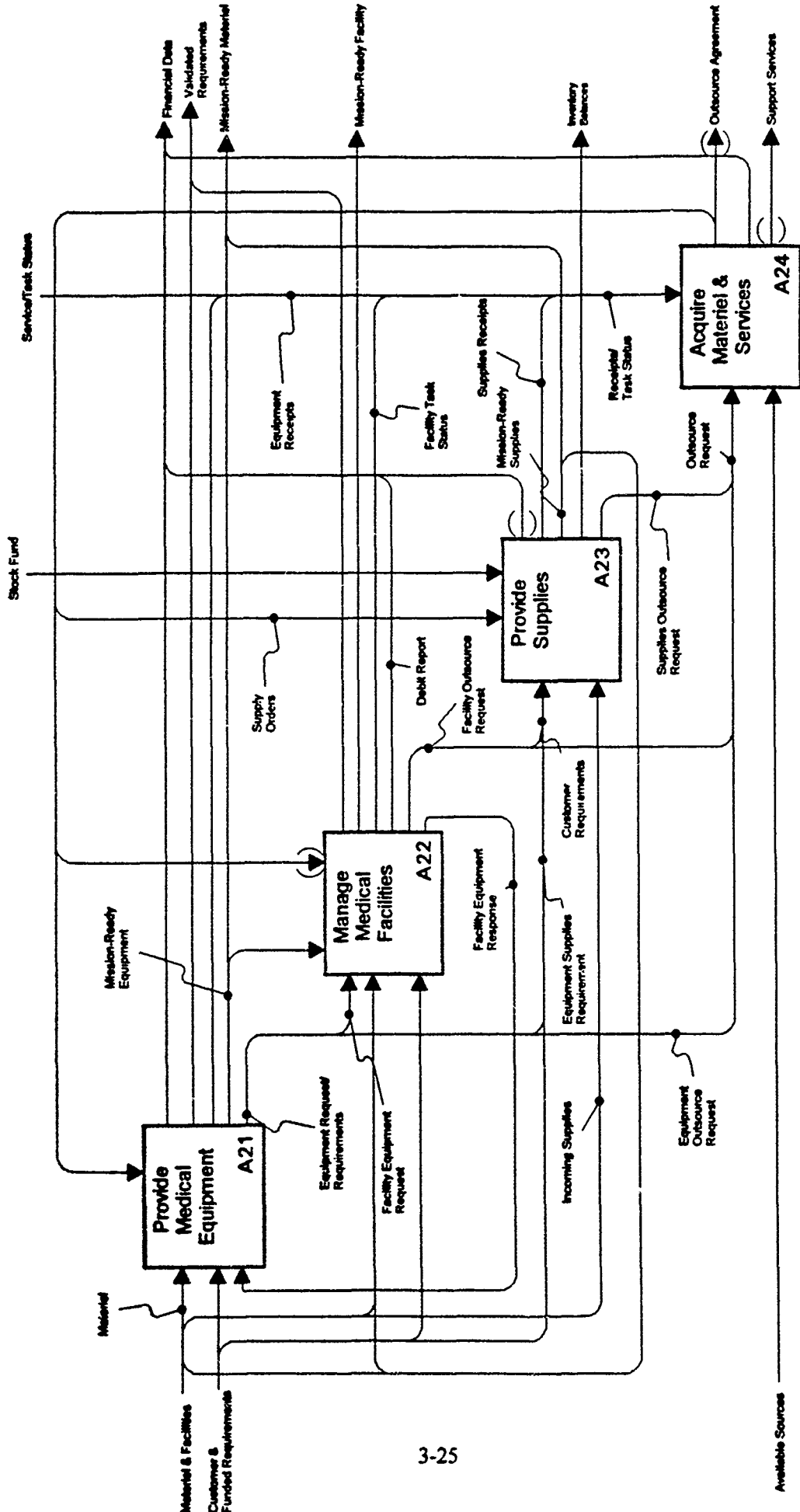
Administer Finances includes those actions necessary to manage the funds assigned to the Logistics activity and its customers. Fund authorizations are updated as assigned funds and applied to logistics transactions; the Comptroller reports and other guidance documents facilitate changes to fund account balances. Guidance documents are interpreted, and adjustments to fund account balances are made. Funds that have an expiration date are either obligated prior to the expiring date, or the owner of the funds is notified in a time frame to allow for withdrawal and reuse. Transactions processed in the other Logistics activities require appropriate changes to funds authorizations or fund account balances. The transactions are then reported to the DoD Standard Accounting Systems for updating and generation of standard accounting financial management reports (e.g., Trial Balance, Statement of Financial Condition, Aging of Accounts Receivable and Accounts Payable, Billing of DBOF sales to the applicable customers for expense reporting). For sales from the DBOF, a surcharge on local purchases is added to every sales transaction.



A2 Perform Medical Logistics

Perform Medical Logistics includes the processes involved in providing the necessary equipment, facilities, supplies, and services needed to support health care delivery. When a funded customer requirement is received, it is validated and processed. Medical Logistics satisfies such requirements with existing inventory or, if authorized, procures from an outside source. Processing customer requirements generates mission-ready materiel and facilities. For customer requirements in which Medical Logistics does not have procurement authority, an outsource request is generated. This outsource request is submitted to an outside organization that will establish an outsource agreement for the required mission-ready materiel, facilities, and support services.

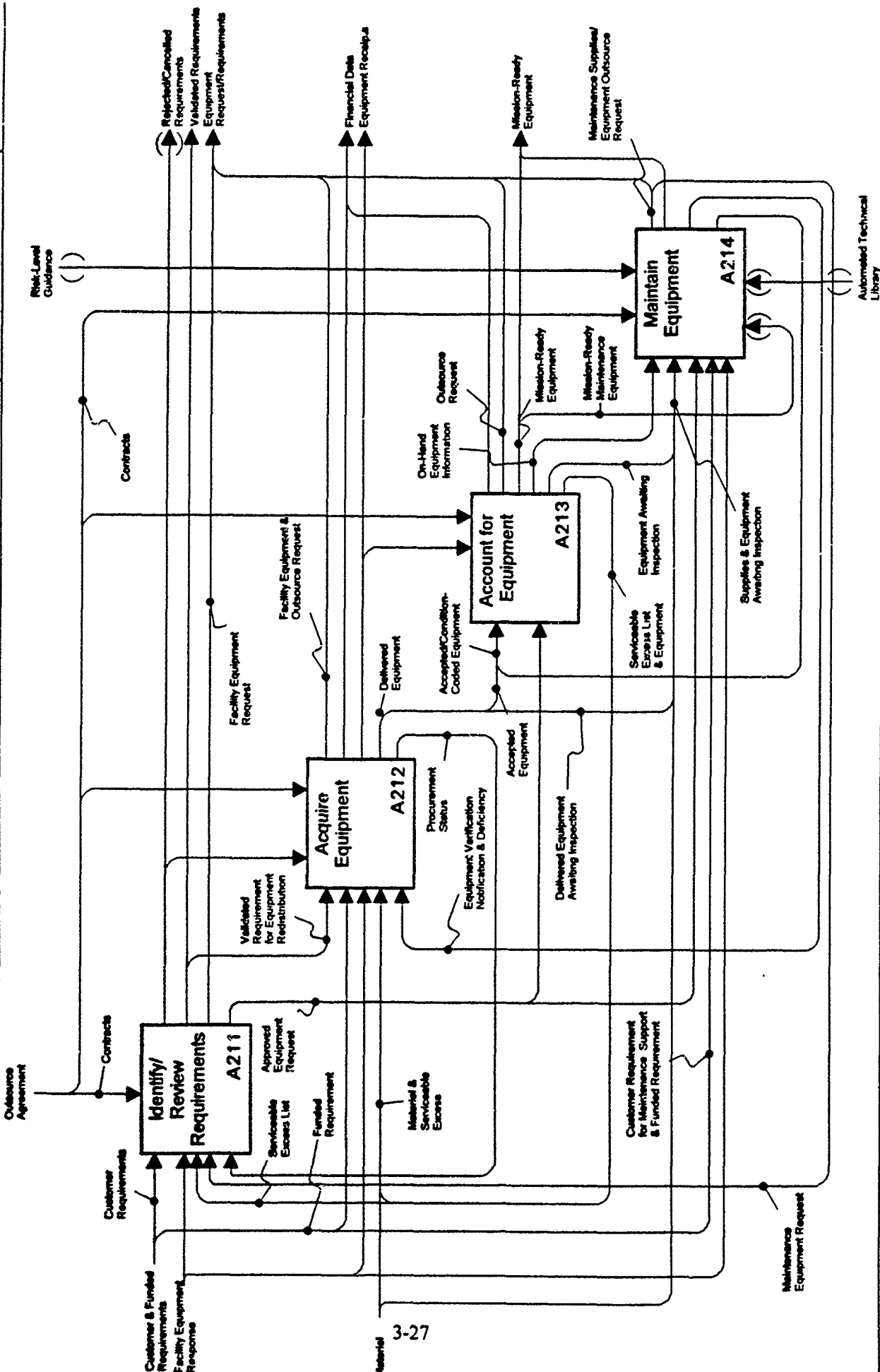
USED AT:	AUTHOR: MEDLOG	DATE: 07/01/93	WORKING	READER	DATE	CONTACT:
PROJECT: MEDLOG TO-BE Workshop	REV: 10		DRAFT			
NOTES: 1 2 3 4 5 6 7 8 9 10			RECOMMENDED			
			PUBLICATION			



ODE: A2	TITLE: Perform Medical Logistics	NUMBER:
---------	----------------------------------	---------

A21 Provide Medical Equipment

Equipment in a medical treatment facility is administered using a life-cycle management approach. This practice is used to ensure best value. Requirements are identified based upon the mission and reviewed to confirm merit. Equipment is then acquired for the customer. Once received, the equipment is inspected, tested, and issued to the customer account to satisfy the identified requirement. Throughout the equipment's useful life, it is maintained on a scheduled basis and repairs are completed as necessary to preserve its original operational capabilities and guarantee safety to both the patient and the operator. Once the equipment is no longer necessary to the mission, it is condition-coded for reissue or turn-in.



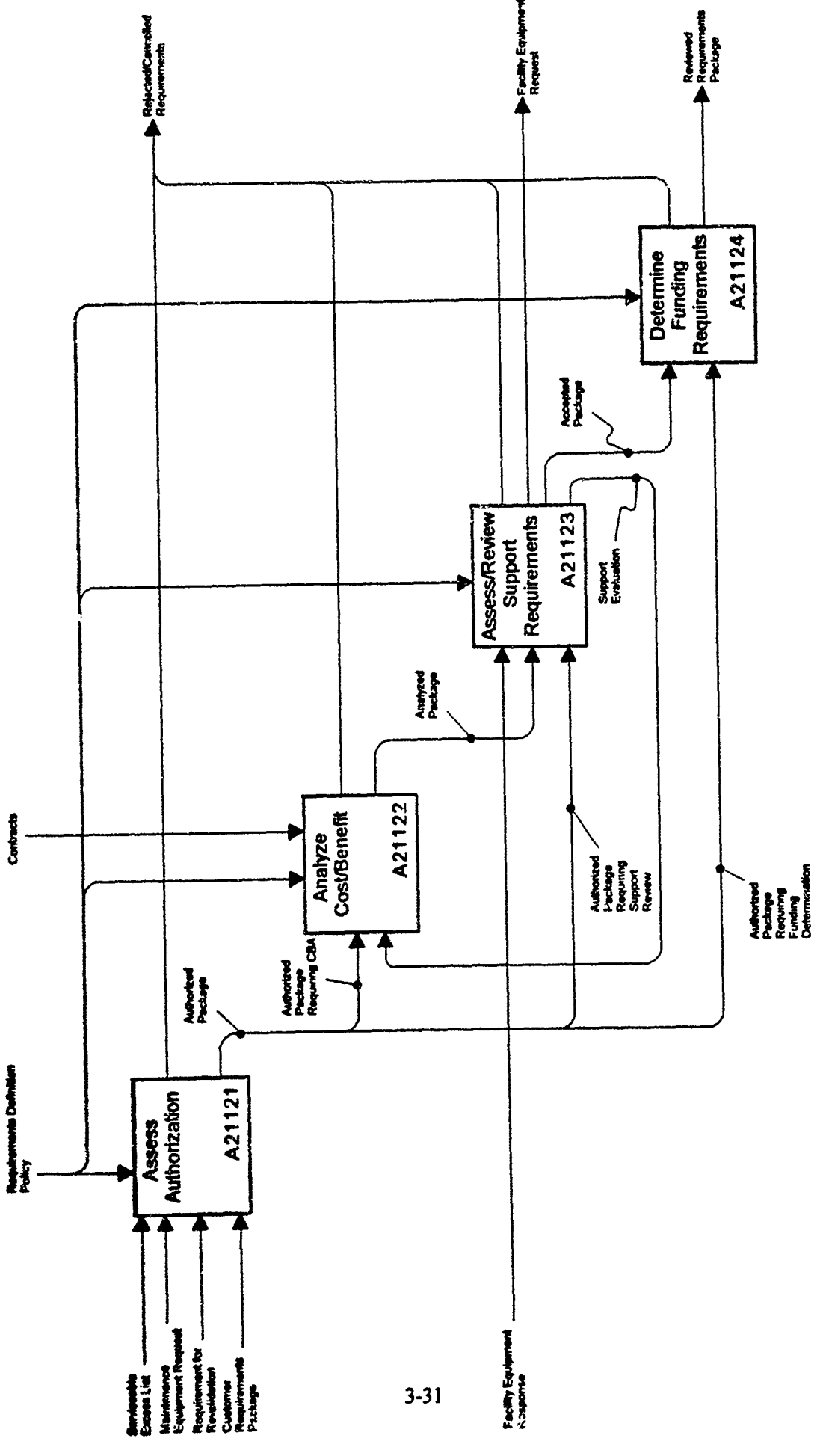
A211 Identify/Review Requirements

Identify/Review Requirements identifies and reviews customer equipment requests. The customer expresses the equipment requirement by completing a document that delineates where the equipment item is needed, by whom, when it is needed, the make/model being requested, and cost data. The customer may receive assistance in completing this equipment request from departments such as Facilities, Biomedical Equipment Repair, Materials Management, or Resource Management. The customer requirements package is forwarded to the Comptroller or Resources Manager for review. High cost capital equipment items require completion of a Cost/Benefit Analysis (CBA) package that compares the life-cycle costs of similar items with their proposed benefits. Total Package Fielding (TPF) captures the overall costs of purchasing a large equipment system. This method considers all costs associated with purchasing an equipment item including training, personnel, facility modifications, consumables, and any other direct or indirect costs. In the requirements evaluation process, serviceable excess lists are reviewed to determine if an available excess equipment item could satisfy the expressed equipment requirement. Once the customer requirements package for equipment has been reviewed and determined to be complete, it is forwarded to a command equipment review committee. This committee, representing the departments of the health care facility, establishes a consolidated priority listing. Typically, there are more requirements than funding available to satisfy these requirements; the authorized unfunded requirements must be revalidated at the end of the budget period. Equipment items require technical reviews by an appointed specialty advisor either within the command or outside of the command. This individual will either approve, disapprove, or recommend a different make/model for a stated requirement. Other approvals may also be required before an item can be forwarded to procurement.

A2112 Evaluate Requirements

Evaluate Requirements begins with submission of a completed customer requirements package for equipment. The authorization for obtaining this equipment, based on the mission of the treatment facility and current medical technology, is requested and approved. Once the authorization is made, a cost/benefit analysis is completed to confirm that the return on investment will be realized. Taken into account in the cost/benefit analysis are all supply, maintenance, facility, and personnel figures. Other models and manufacturers of like equipment are also taken in to consideration. Once the package is accepted, it is reviewed to select the correct appropriation for funding the equipment purchase.

USED AT:	AUTHOR: MEDLOG		DATE: 01/01/93		WORKING		READER		DATE		CONTEXT:	
PROJECT: MEDLOG TO-BE Workshop	REV:				DRAFT						<input type="checkbox"/>	
NOTES: 1 2 3 4 5 6 7 8 9 10					RECOMMENDED						<input type="checkbox"/>	
					PUBLICATION						<input type="checkbox"/>	

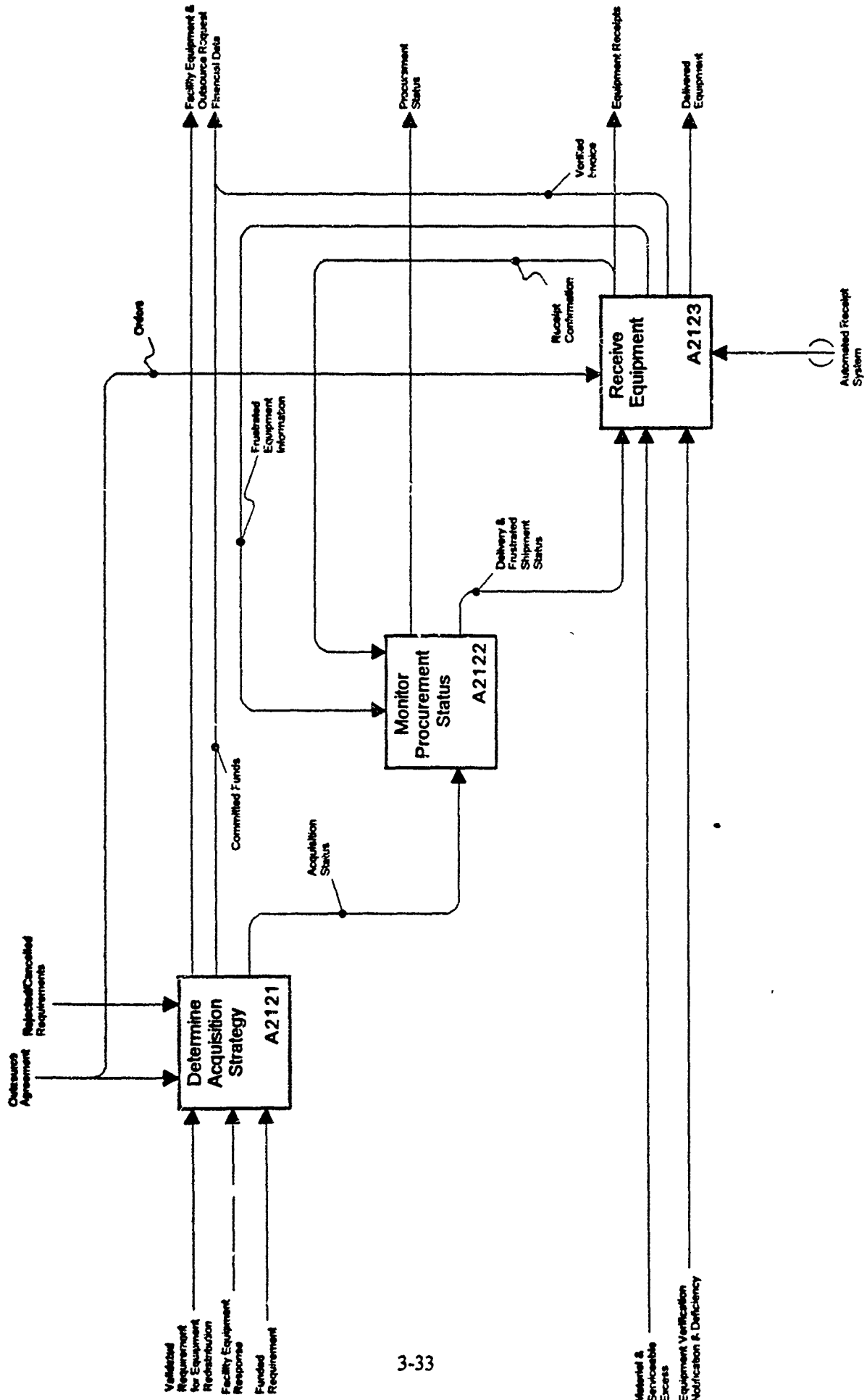


ODE: A2112	TITLE: Evaluate Requirements	NUMBER:
------------	------------------------------	---------

A212 Acquire Equipment

Equipment acquisition can be simplified by using existing contracts through such means as Prime Vendor, the General Services Administration (GSA), or the Department of Veterans Affairs (DVA). Once the acquisition strategy has been determined, funds are committed and the procurement status is monitored by contracting personnel. This procurement status information is periodically provided to the customer. Equipment is received, and the contents of the delivery are checked and reconciled with the shipping documents. When there is a discrepancy, receiving personnel contact contracting personnel who contact the vendor to resolve the discrepancy. Once the acceptance process is complete, the item is tagged and property accountability is established. If the equipment item is discovered to be unsafe or nonfunctional, it is returned to the vendor. Excess equipment being delivered to a receiving command will also undergo a safety test and inspection before it is delivered to the receiving department.

USED AT:	AUTHOR: MEDLOG	DATE: 07/01/83	WORKING	READER	DATE
PROJECT: MEDLOG TO-BE Workshop		REV:	DRAFT		
NOTES: 1 2 3 4 5 6 7 8 9 10			RECOMMENDED		
			PUBLICATION		



ODE: A212	TITLE: Acquire Equipment	NUMBER:
-----------	--------------------------	---------

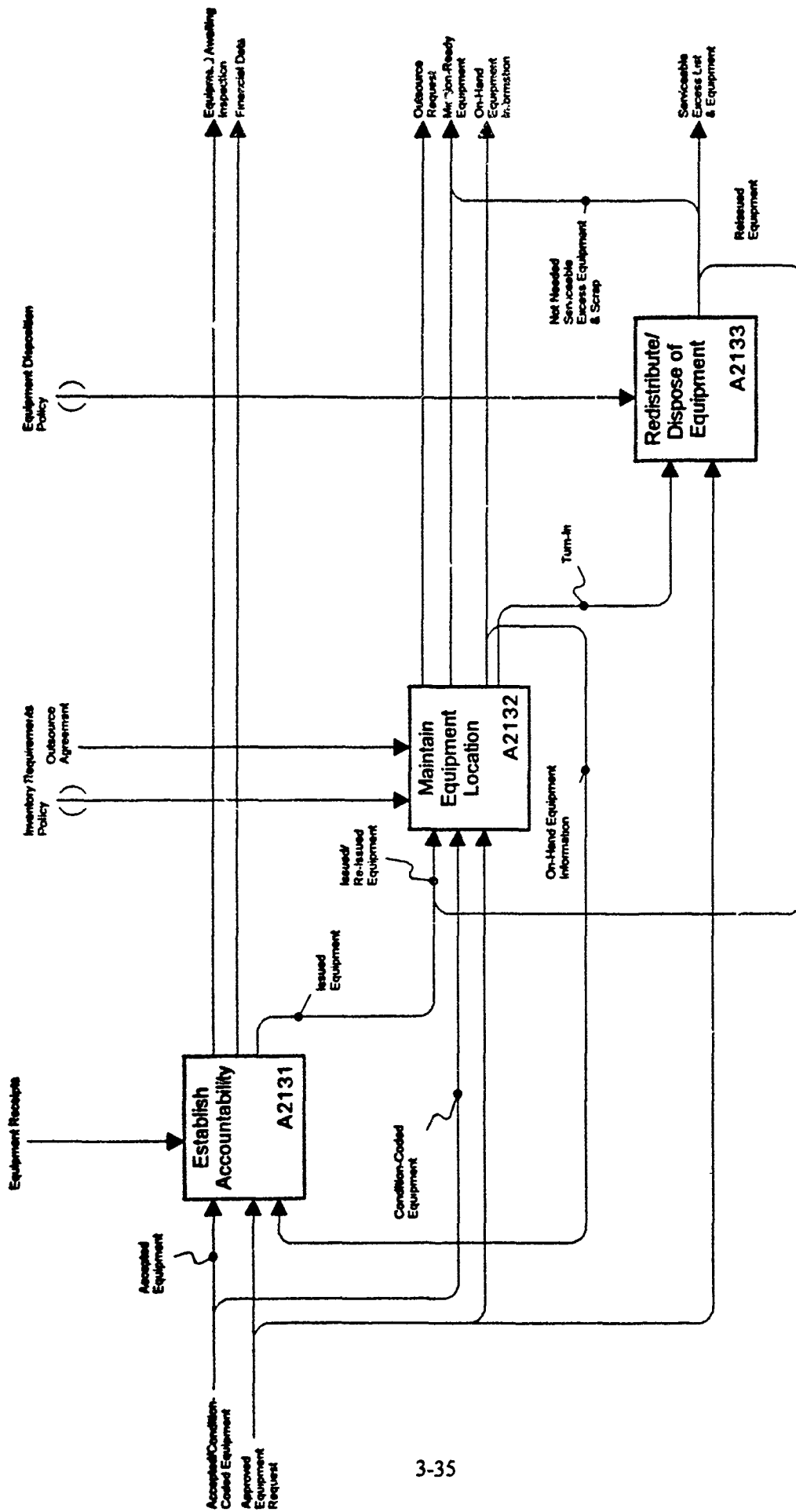
A213 Account for Equipment

Once an equipment item has been inspected and safety tested by Medical Repair personnel, it is ready to be identified on a property record to establish accountability. The property record lists such data as the make, model, date of manufacture, acquisition date, cost and contract identification, property account number, and to whom the item is assigned. Excess equipment items are received with a property record from the donor activity. Their accountability is assigned to a receiving department. As equipment items get moved between departments in a facility, their locations are annotated on the equipment location records. Periodic inventories are conducted to account for equipment items. Inventories may be conducted either manually or with automated equipment. Inventory results are reconciled with the property records and adjustments are made to reflect the current inventory. Equipment items excess to the needs of a department may be turned in for redistribution. Depending upon an item's condition, it may be redistributed within the activity, to another health care activity or to a Defense Reutilization Marketing Office (DRMO) for redistribution or salvage. Excess equipment lists are generated for redistribution activities.

A2132 Maintain Equipment Location

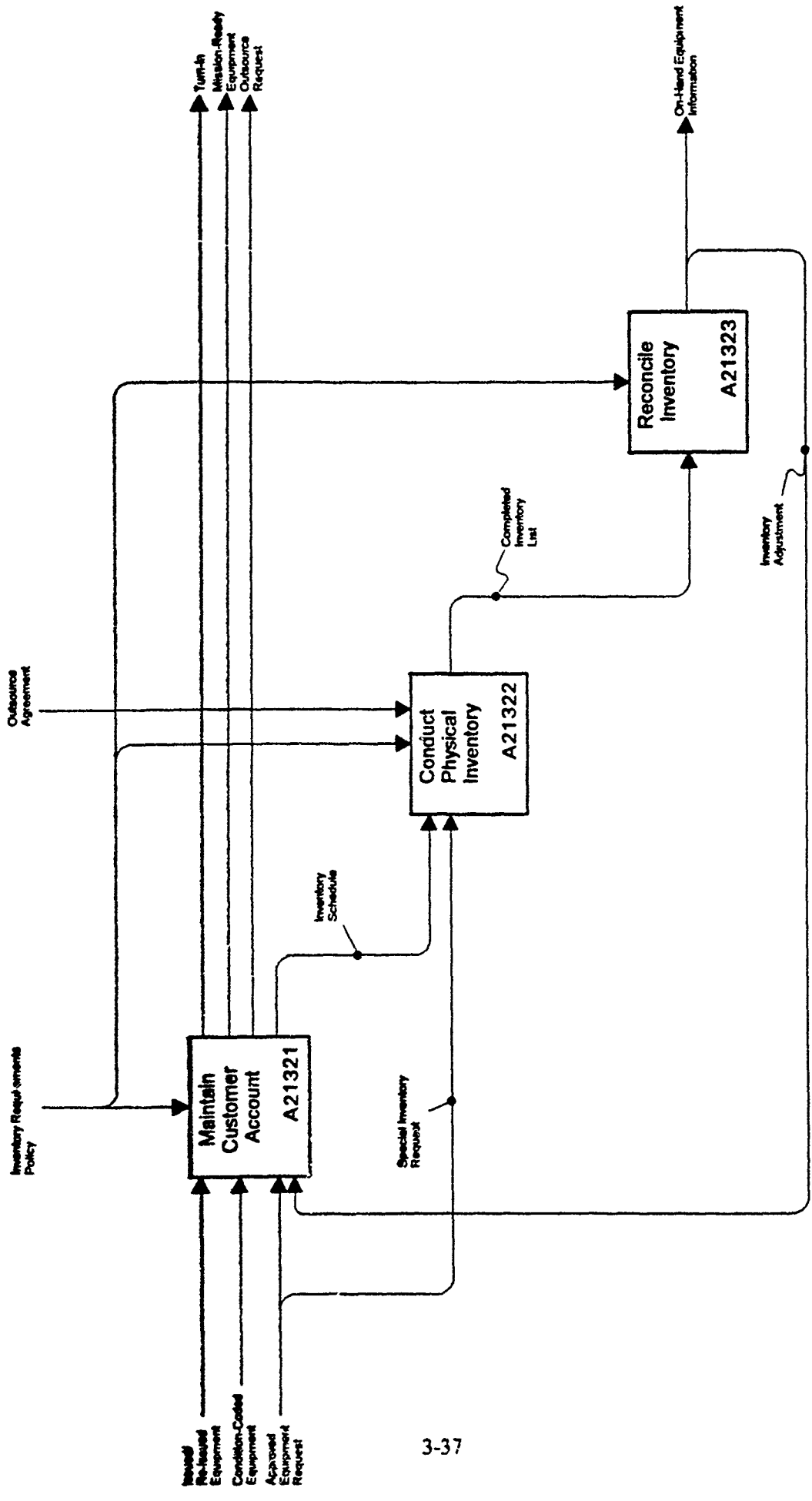
Maintain Equipment Location is the process of tracking and updating the location of equipment. Property identification tags are affixed to equipment items. These tags uniquely identify a single item. Periodically, an inventory of the equipment is performed to ensure nothing has been stolen or moved to another department. This inventory may be regularly scheduled (semiannual, annual, triennial) depending upon Service policy or unscheduled because of a change in property custodians (personnel transfer). Once the physical inventory is completed, the results must be reconciled with the property account records. Any adjustments to the inventory will be reflected in the property records (e.g., gains by inventory, report of survey).

USED AT:	AUTHOR: MEDLOG	DATE: 07/01/83	WORKING	READER	DATE	CONFIRM:
PROJECT: MEDLOG TO-BE Workshop	REV:		DRAFT			
NOTES: 1 2 3 4 5 6 7 8 9 10			RECOMMENDED			
			PUBLICATION			



ODE: A213	TITLE: Account for Equipment	NUMBER:
-----------	------------------------------	---------

USED AT:	AUTHOR: MEDLOG	DATE: 07/01/83	WORKING	READER	DATE	CONTEXT:
PROJECT: MEDLOG TO-BE Workshop	REV:		DRAFT			
NOTES: 1 2 3 4 5 6 7 8 9 10			RECOMMENDED			
			PUBLICATION			



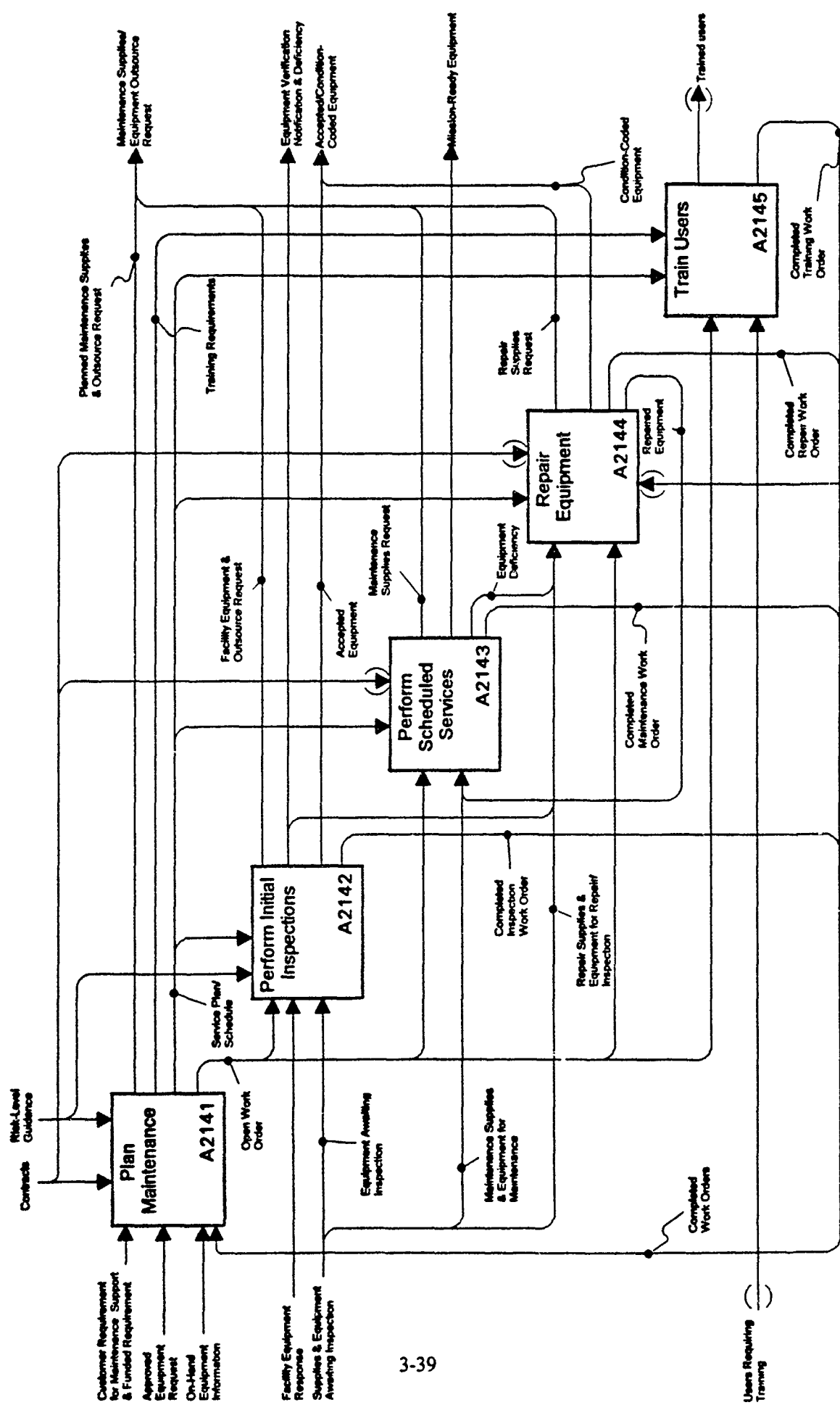
ODE: A2132	TITLE: Maintain Equipment Location	NUMBER:
------------	------------------------------------	---------

A214 Maintain Equipment

The Maintain Equipment activity utilizes information relating to current technology, clinical protocols, on-hand equipment, customer requirements, and projected buys to establish current and future equipment maintenance plans. This activity documents this information and updates required equipment records for future analysis. After new equipment is received, it is sent to the equipment specialists who verify completeness of contract order lines, assemble the equipment, ensure both patient and operator safety in all modes of operation, establish a maintenance history, and schedule periodic services. During the life cycle of the equipment, activities are performed to support the equipment and preserve peak performance. These actions include the cyclic lubrications, cleaning, performance testing and/or calibration, and both mechanical and electrical safety inspections. In the event of equipment failure, major and minor repairs are made. Throughout the life cycle, training is prepared and presented to both operator and maintenance personnel as needed to maximize equipment utilization.

USED AT:	AUTHOR:	MEDLOG	DATE:	07/01/93
	PROJECT:	MEDLOG TO-BE Workshop	REV:	
	NOTES:	1 2 3 4 5 6 7 8 9 10		

X	WORKING	READER	DATE	CONTEXT:
	DRAFT			<input type="checkbox"/>
	RECOMMENDED			<input type="checkbox"/>
	PUBLICATION			<input type="checkbox"/>

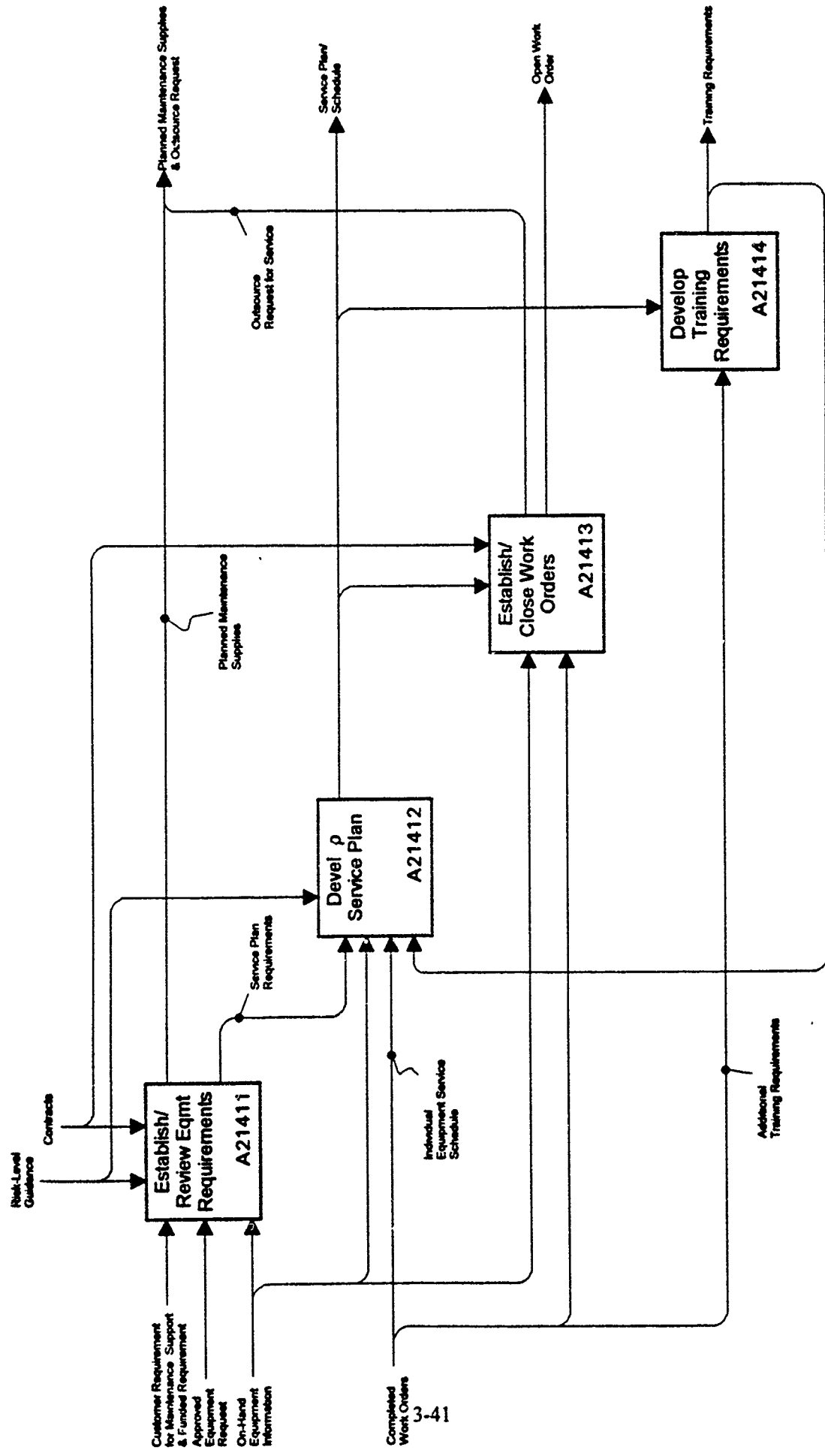


ODE: A214	TITLE: Maintain Equipment	NUMBER:
-----------	---------------------------	---------

A2141 Plan Maintenance

In Plan Maintenance, equipment, mission, customer/patient needs and manpower data are collected and analyzed. This information is used to project requirements, identify options, and schedule the workload to provide the best solutions to customer requirements. Establish/Close Work Orders acts as a Maintenance Control Point initiating service orders based on the service plan and on unscheduled Customer Requirements. Completed work orders are closed and all service data is transcribed to the equipment records for historical purposes and future projections. A plan for new equipment and sustainment training requirements is also produced for both operators and maintainers.

USED AT:	AUTHOR:	MEDLOG	DATE:	07/01/93	WORKING	READER	DATE	CONTEXT:
PROJECT:	MEDLOG TO-BE Workshop				DRAFT			
NOTES:	1	2	3	4	5	6	7	8
	9	10						

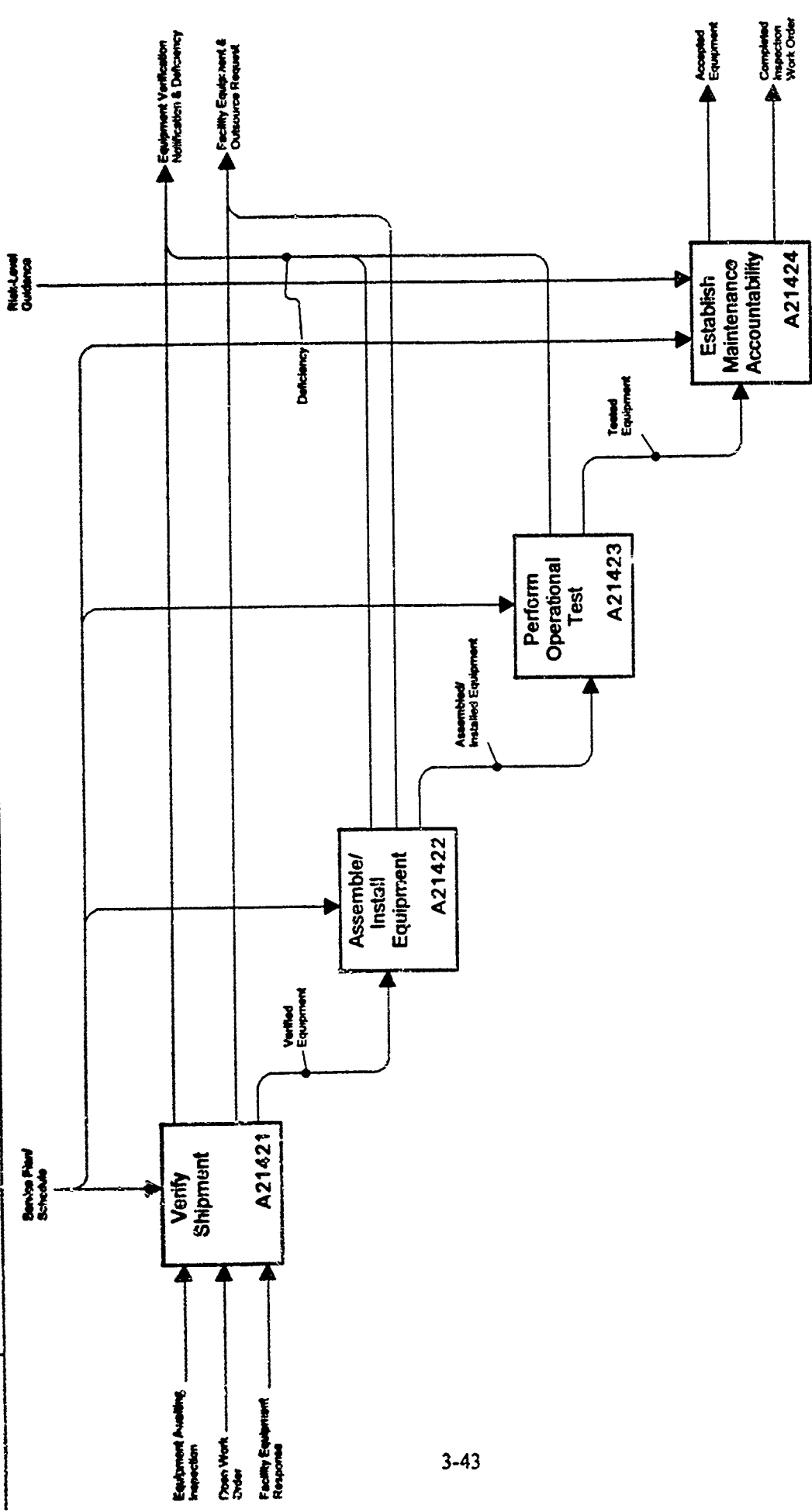


ODE: A2141	TITLE: Plan Maintenance	NUMBER:
------------	-------------------------	---------

A2142 Perform Initial Inspection

Perform Initial Inspection augments the acquisition and receipt of equipment operations. Equipment specialists compare order lines requested with actual receipt to ensure completeness and to immediately identify any discrepancies. Equipment is assembled or installed, and an operational test is completed. All historical data critical to tracking an equipment item are captured upon receipt, and maintenance services are scheduled.

USED AT:	AUTHOR: MEDLOG	DATE: 01/01/93	WORKING	REVIEWER	EXT: 0000
PROJECT: MEDLOG TO-BE Workshop	REV: 10		DRAFT		
NOTES: 1 2 3 4 5 6 7 8 9 10			RECOMMENDED		
			PUBLICATION		

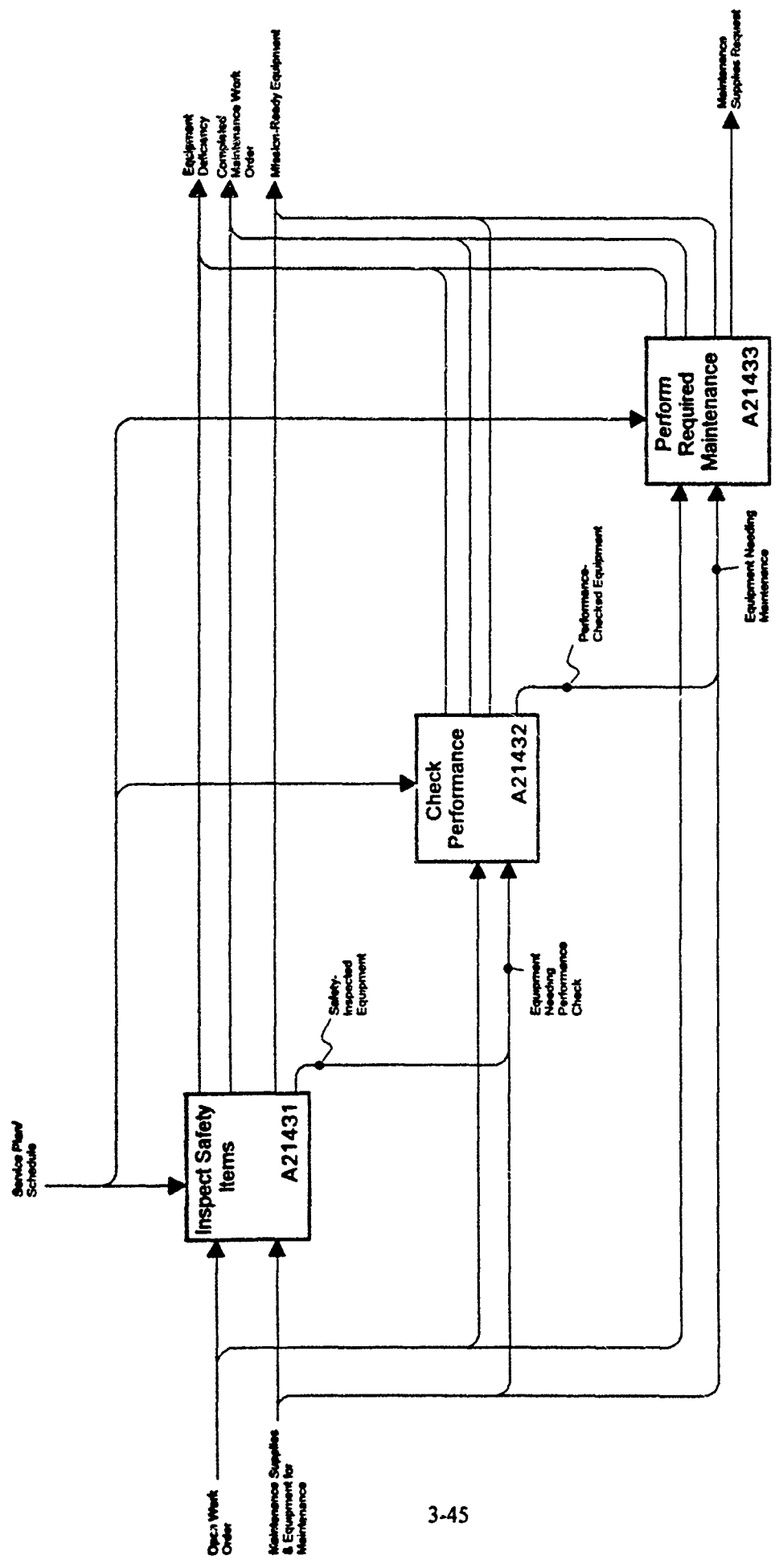


ODE: A2142	TITLE: Perform Initial Inspections	NUMBER: 1
------------	------------------------------------	-----------

A2143 Perform Scheduled Services

Perform Scheduled Services consists of safety inspections, performance verification, and preventive maintenance to ensure the reliability of the equipment. The technicians plan their work by reviewing the work orders, consulting department personnel to ensure availability of the equipment, and gathering all necessary supplies and support equipment to accomplish the work. They test the equipment in compliance with governing regulations and manufacturer's recommendations to ensure patient and operator safety. They also verify that all functions are performing properly, and calibrate the equipment if necessary; as minor defects are identified, they are corrected. Preventive maintenance is performed, and parts are replaced as required to obtain optimum operational availability of the item. Parts and supplies consumed are issued from on-hand balances, and replacements are ordered when minimum levels are reached. All completed work is posted to the equipment history.

USED AT:	AUTHOR: MEDLOG	DATE: 11/19/93	WORK:	RE:	1	2	3	4	5	6	7	8	9	10
PROJECT: MEDLOG TO-BE Workshop	REV:													
NOTES: 1 2 3 4 5 6 7 8 9 10	DRAFT													
	RECOMMENDED													
	PUBLICATION													

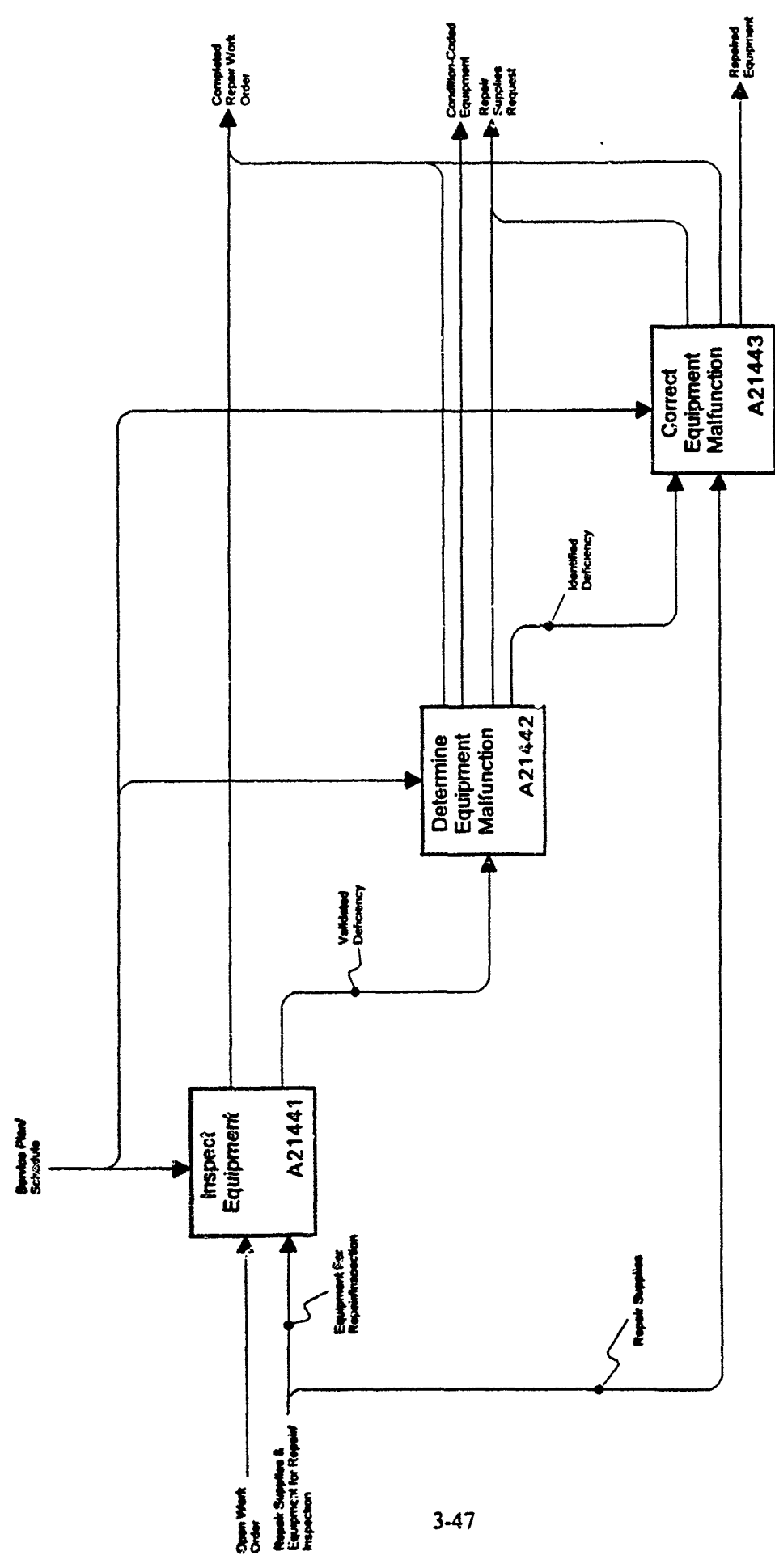


ODE: A2143	TITLE: Perform Scheduled Services	NUMBER:
------------	-----------------------------------	---------

A2144 Repair Equipment

In Repair Equipment, maintenance personnel correct equipment malfunctions that have been identified by customer requests. Complaints are validated and additional faults are determined by conducting a visual inspection of the equipment and performing an operational test of all functions. A determination can then be made as to whether the required servicing can be done in-house, whether the equipment will have to be sent out for repair, or a service representative called in on a one-time basis. A more detailed examination is then necessary to analyze the failure, make necessary adjustments, or isolate the faulty component. Test equipment such as meters, oscilloscopes, and specialized support equipment may be necessary. When the defective part has been isolated, a replacement can be drawn from supply or ordered from Federal Stock, the Original Equipment Manufacturer, or another vendor or distributor. The component will then be replaced and the equipment tested to ensure that the repairs were effective.

USED AT:	AUTHOR: MEDLOG	DATE: 01/01/83	WORKING	READER	DATE
PROJECT: MEDLOG TO-Be Workshop		REV:	DRAFT		
NOTES: 1 2 3 4 5 6 7 8 9 10			RECOMMENDED		
			PUBLICATION		



ODE: A2144	TITLE: Repair Equipment	NUMBER:
------------	-------------------------	---------

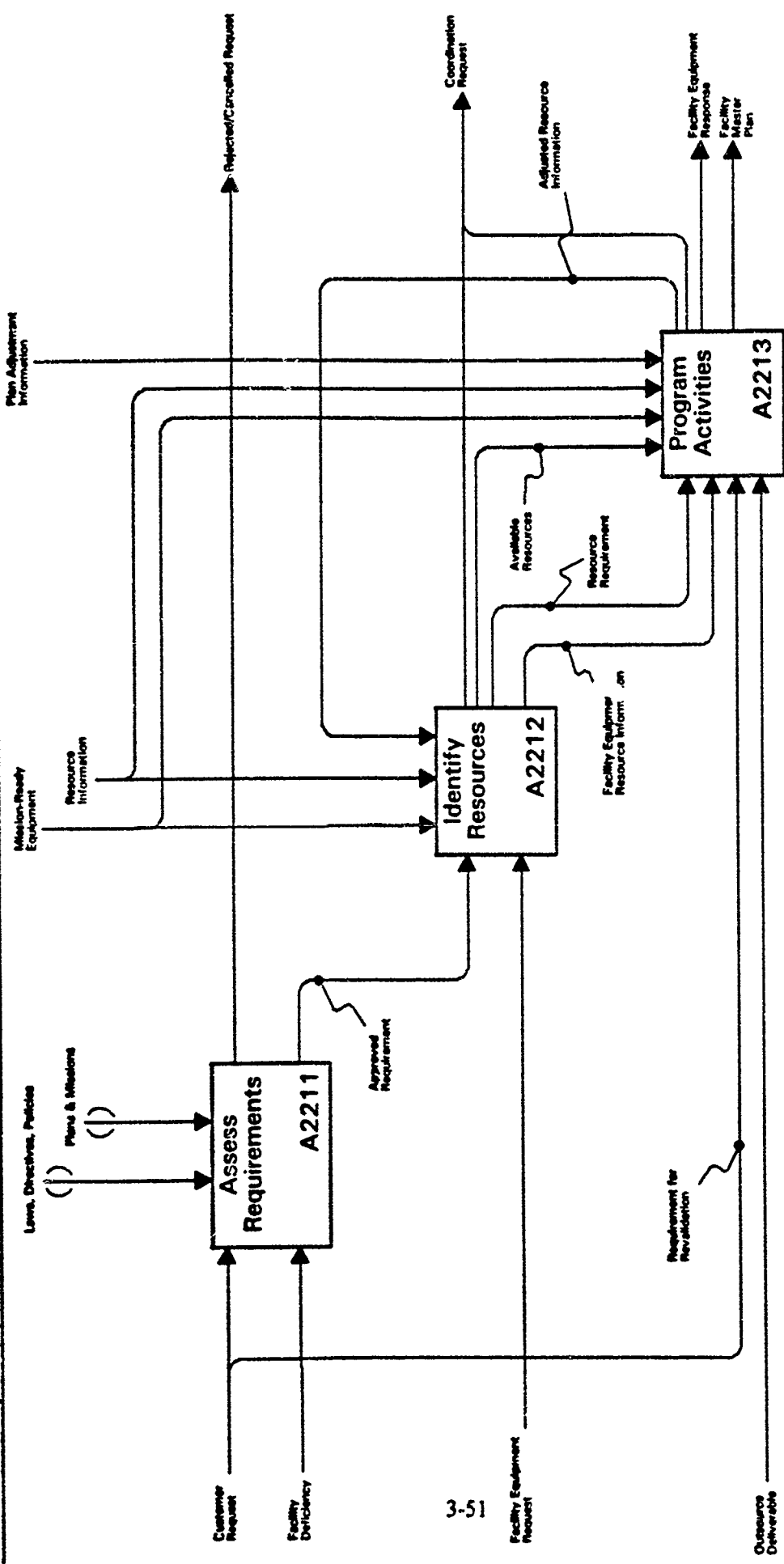
A22 Manage Medical Facilities

Facility operations management seeks to allocate facility assets optimally by setting both short- and long-term goals. Developing day-to-day operational procedures and long-term requirements that support the facility's mission is the key goal of the Facility Master Plan. The plan guides the internal coordination of programs and the acquisition of goods and services from outside organizations, vendors, and agencies. Direct oversight of all facility projects and programs ensures that they meet operational objectives, while a series of final evaluations measures the success of the overall facility operation.

A221 Plan Facility Operations

The success of facility management depends on a visionary planning process. This process begins by determining which customer requests are supported by need and authorization. Many requests for facility assets are routine, allowing the use of standard procedures and resources. However, ever-changing medical mission requirements call for a dynamic planning and programming process for current and out-year needs. The Facility Master Plan directs the management of all assets, policies, and procedures.

USED AT:	AUTHOR: MEDLOG	DATE: 07/01/93	WORKING	READER	DATE	CONTEXT:
PROJECT: MEDLOGTO-BE Workshop	REV DATE:		DRAFT			
NOTES: 1 2 3 4 5 6 7 8 9 10	REV:		RECOMMENDED			
			PUBLICATION			

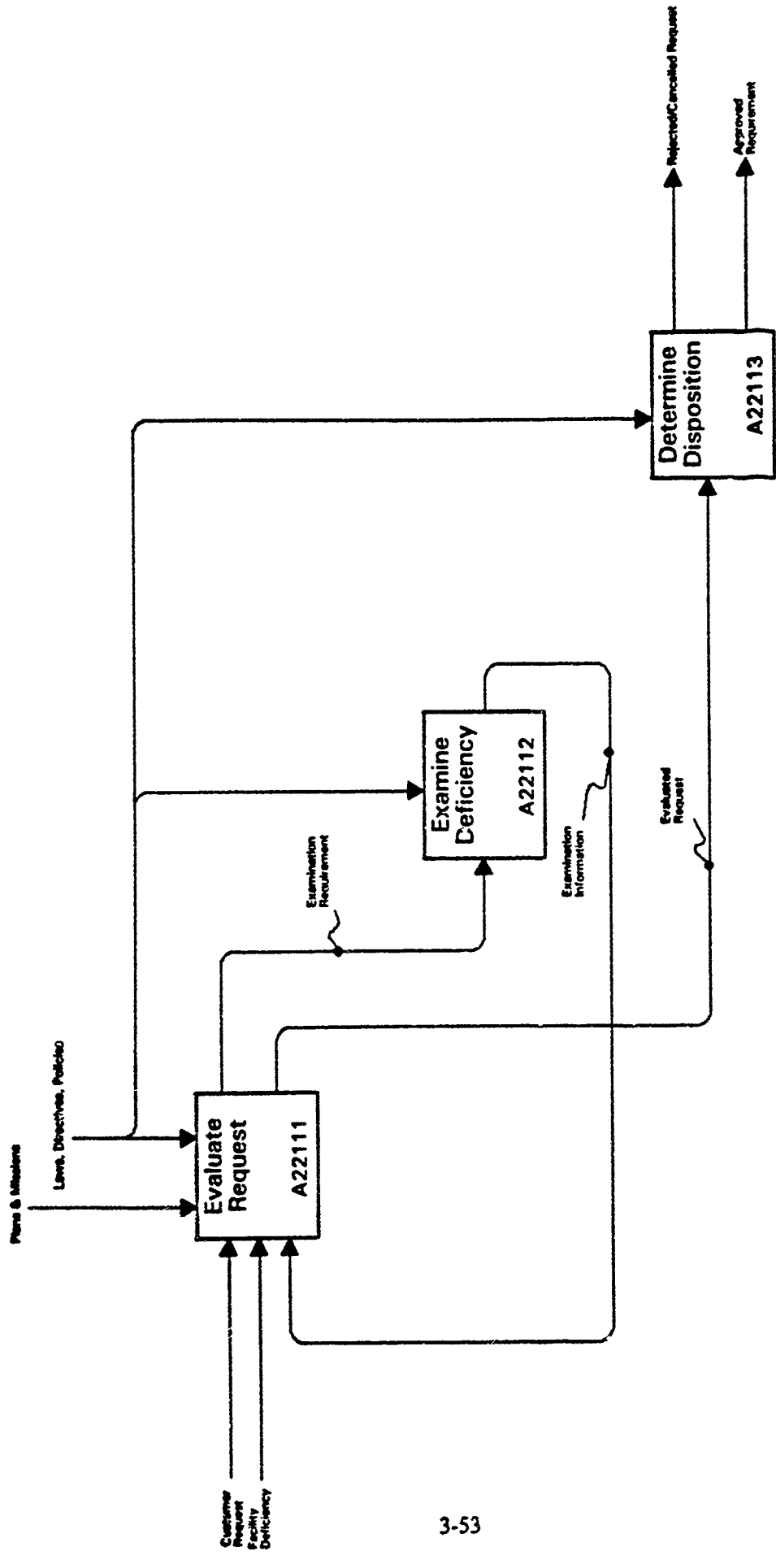


NODE: A221	TITLE: Plan Facility Operations	NUMBER:
------------	---------------------------------	---------

A2211 Assess Requirements

A customer request is evaluated by comparing the need to laws, policies, and directives concerning the medical mission. Once a request for facility assets is validated, it may require a physical inspection of a system, program, or the facility itself to assess the practicality of the request. The disposition of a validated request may be a Rejected/Cancelled Request or an Approved Requirement.

USED AT:	AUTHOR: MEDLOG	DATE: 07/01/93	WORKING	READER	DATE CONTEXT:
PROJECT: MEDLOG TO BE Workshop	REV DATE:		DRAFT		
NOTES: 1 2 3 4 5 6 7 8 9 10	REV:		RECOMMENDED		
			PUBLICATION		

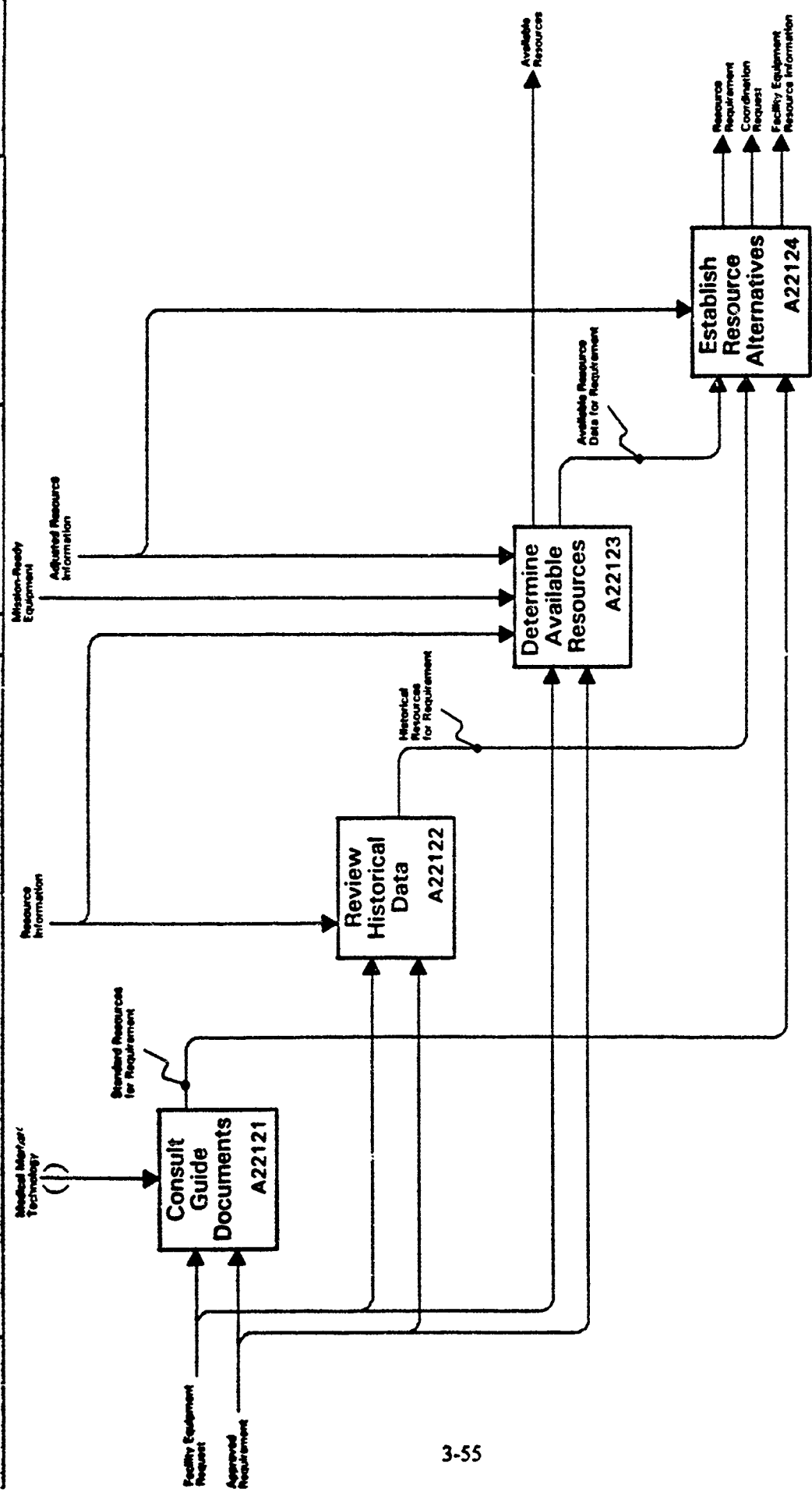


NODE: A2211	TITLE: Assess Requirements	NUMBER:
-------------	----------------------------	---------

A2212 Identify Resources

Facility operation planners must know what resources will be needed for each program or project they wish to include in the Facility Master Plan. Research into standard trade references and work schedules, a search of historical data for similar work, and a review of local references form the basis for determining needed resources. Once these are known, a variety of alternative sources can be identified and studied for feasibility.

USED AT:	AUTHOR:	MEDLOG	DATE:	01/01/93	WORKING	READER	DATE	CONTEXT:
	PROJECT:	MEDLOGTO-BE Workshop	REV DATE:		DRAFT			
	NOTES:	1 2 3 4 5 6 7 8 9 10	REV:		RECOMMENDED			
					PUBLICATION			

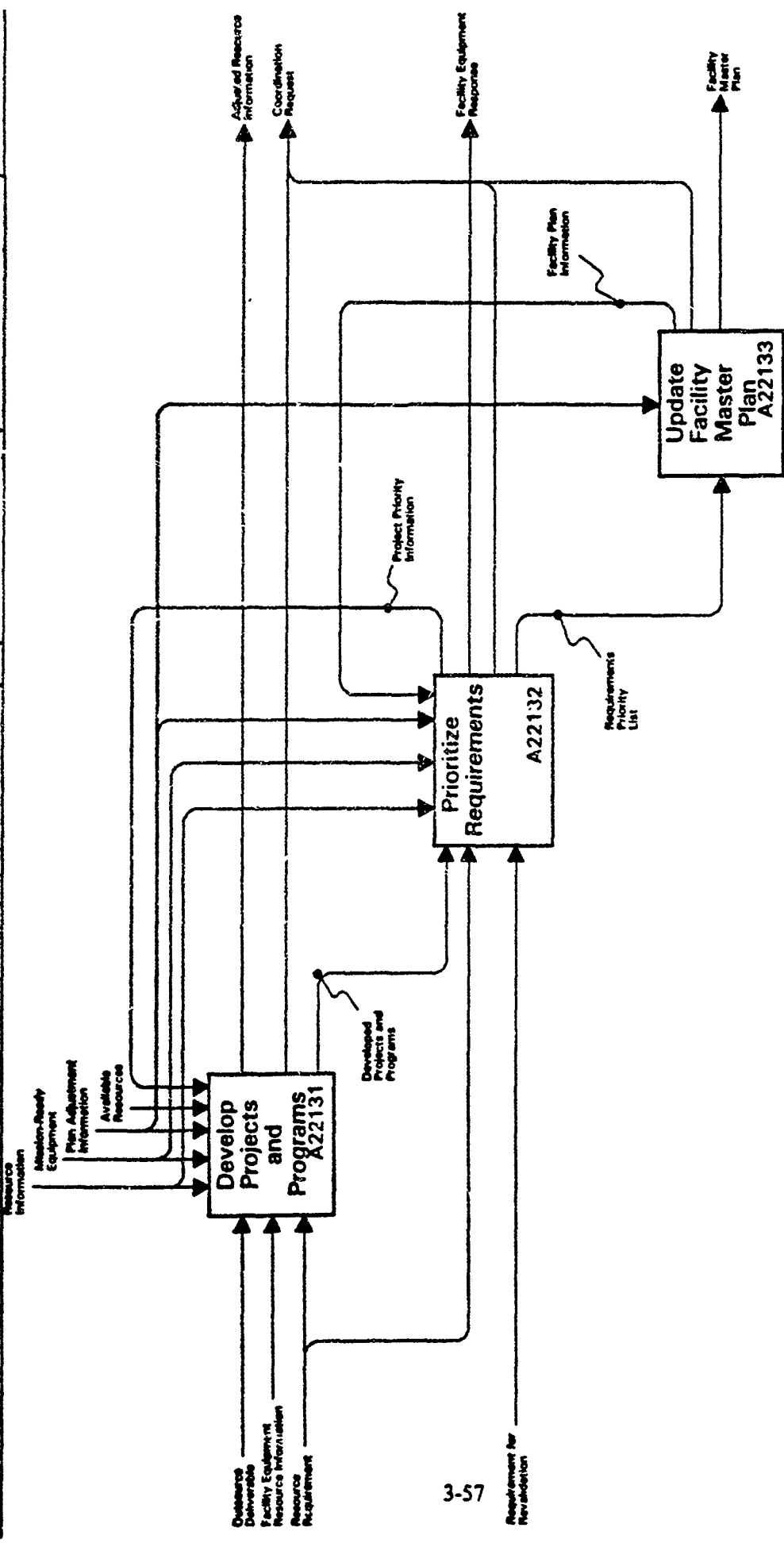


NODE: A2212	TITLE: Identify Resources	NUMBER:
-------------	---------------------------	---------

A2213 Program Activities

All activities under the Facility Manager's control must be listed and prioritized in order to identify the resources needed for their accomplishment. This activity assesses mission requirements and available resources, then develops a Facility Master Plan that puts those resources to best use in support of the medical mission. The plan guides the operation of facility systems and programs; as well as the conduct of maintenance and repair, facility modifications, and minor construction. Periodic updates may reprioritize projects as missions or resources change.

USED AT:	AUTHOR: MEDLOG	DATE: 07/01/93	WORKING	READER	DATE	CONTEXT:
	PROJECT: MEDLOG-TO-BE Workshop	REV DATE:	DRAFT			<input type="checkbox"/>
	NOTES: 1 2 3 4 5 6 7 8 9 10	REV:	RECOMMENDED			<input type="checkbox"/>
			PUBLICATION			66

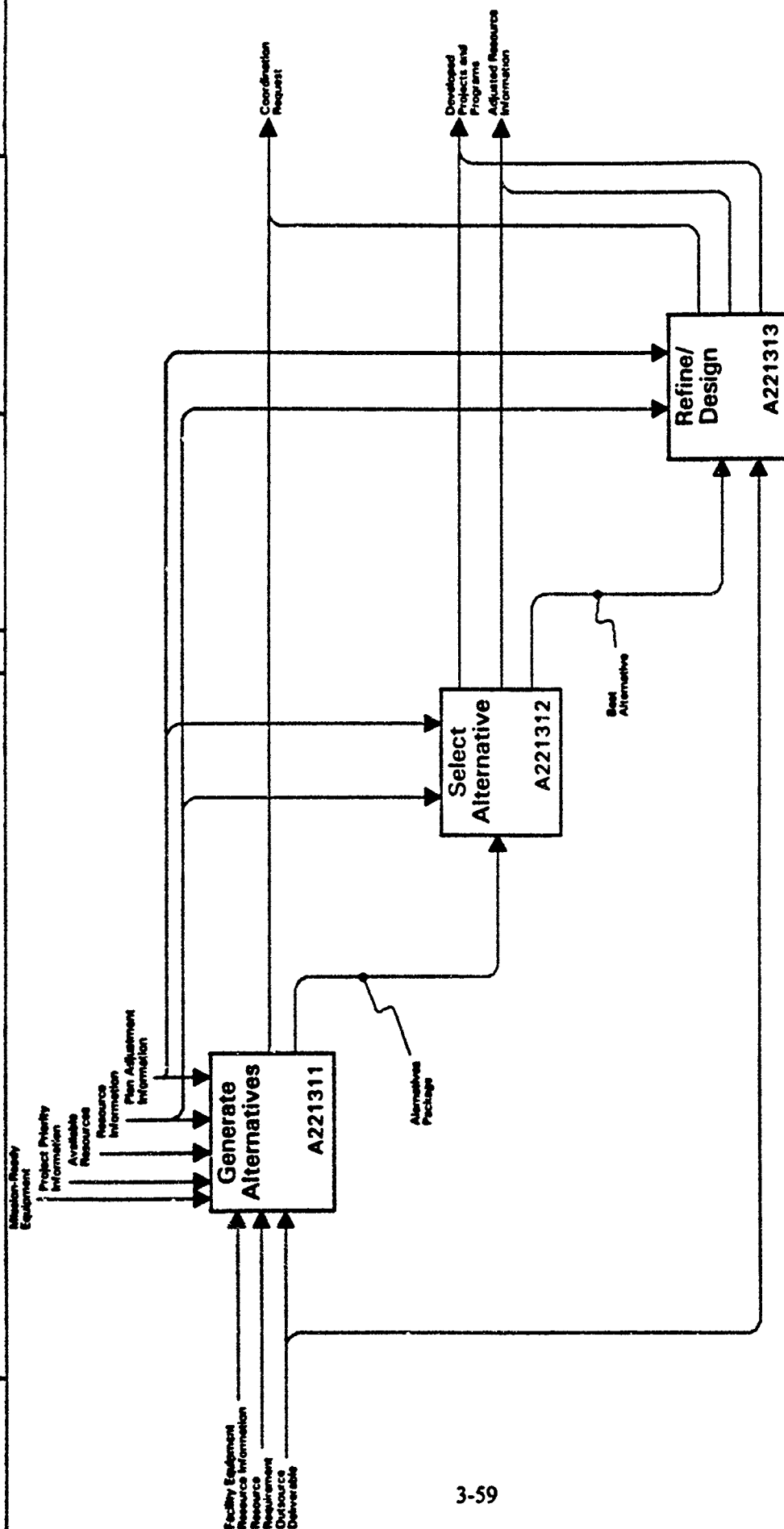


NODE: A2213	TITLE: Program Activities	NUMBER:
-------------	---------------------------	---------

A22131 Develop Projects and Programs

A project or program may often be accomplished in a number of different ways. This activity generates and develops several alternatives based on the available resources and mission requirements. The best alternative is selected for more definitive development.

USED AT:	AUTHOR: MEDLOG	DATE: 07/01/93	WORKING	READER	DATE	CONTEXT:
PROJECT: MEDLOGTO-BE Workshop	REV DATE:		DRAFT			
NOTES: 1 2 3 4 5 6 7 8 9 10	REV:		RECOMMENDED			
			PUBLICATION			

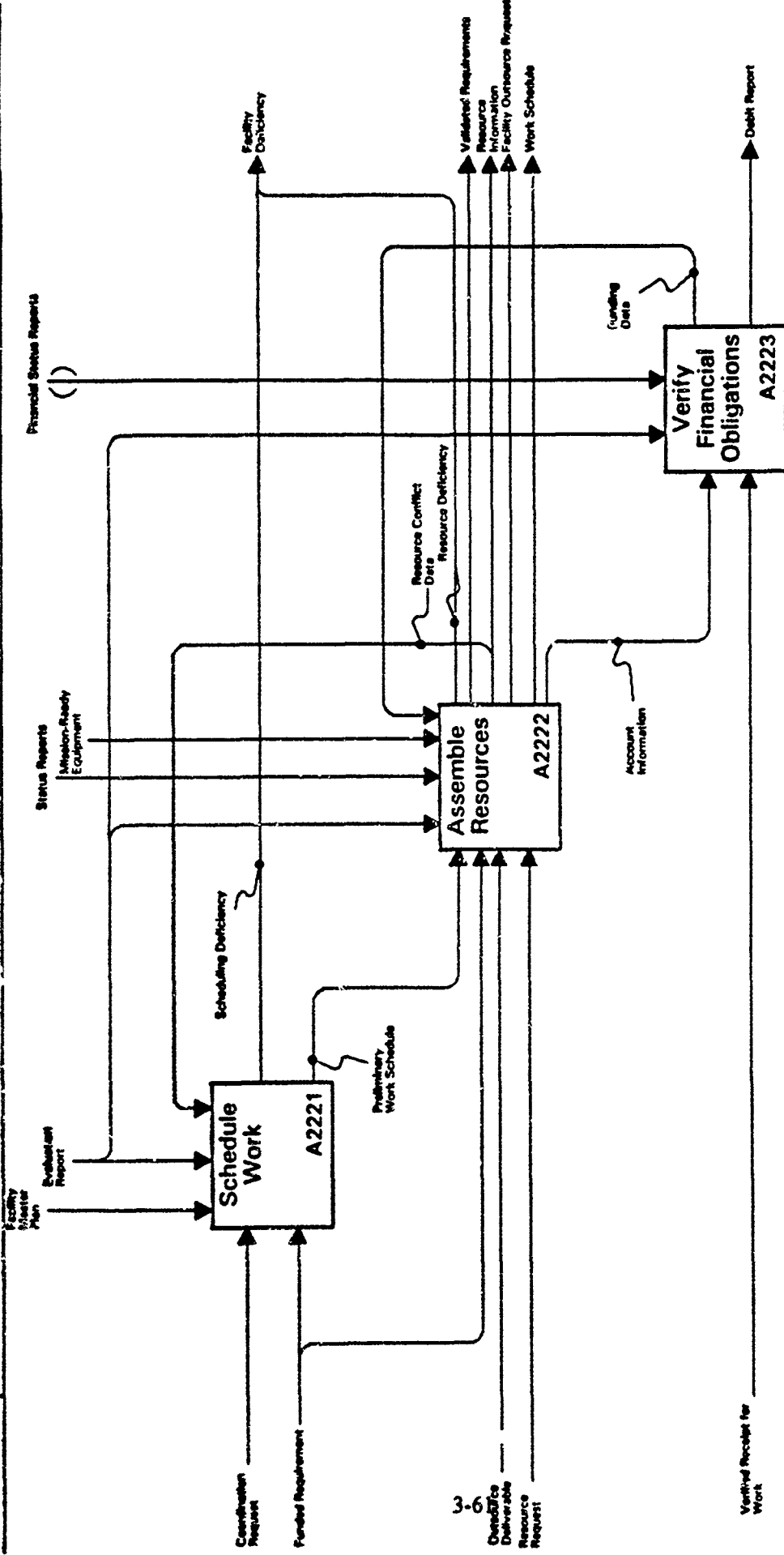


NODE: A22131	TITLE: Develop Projects and Programs	NUMBER:
--------------	--------------------------------------	---------

A222 Coordinate Facility Operations

This activity ensures resources (funds, materiel, manpower, and time) are on-hand at the right place and time so projects and programs can be accomplished. Part of the coordination process is to schedule resources and identify shortfalls to meet requirements. When resources are not available, they are acquired through appropriate channels. When work is accomplished by organizations that are reimbursed funds, these obligations are verified by comparing the work scheduled to the work completed.

USED AT:	AUTHOR: MEDLOG	DATE: 01/01/93	WORKING	HEADER	CONTEXT:
	PROJECT: MEDLOGTO-BE Workshop	REV DATE:	DRAFT		
	NOTES: 1 2 3 4 5 6 7 8 9 10	REV:	RECOMMENDED		
			PUBLICATION		



NODE: A22	TITLE: Coordinate Facility Operations	NUMBER:
-----------	---------------------------------------	---------

A2221 Schedule Work

Scheduling work in a facility ensures that projects and programs with the highest priority begin and are completed so that all resources are used efficiently. As conflicts arise with other requirements, minor adjustments are made or planners are notified and the schedule adjusted. Within this process, quality assurance monitors for compliance with the Facility Master Plan and identifies discrepancies to the planners.

USED AT:

AUTHOR:

MEDLOG

PROJECT:

DATE: 6/10/93

REV DATE:

REV:

NOTES: 1 2 3 4 5 6 7 8 9 10

WORKING

READER

DATE

CONTEXT:

MEDLOGTO-8E Workshop

REV DATE:

REV:

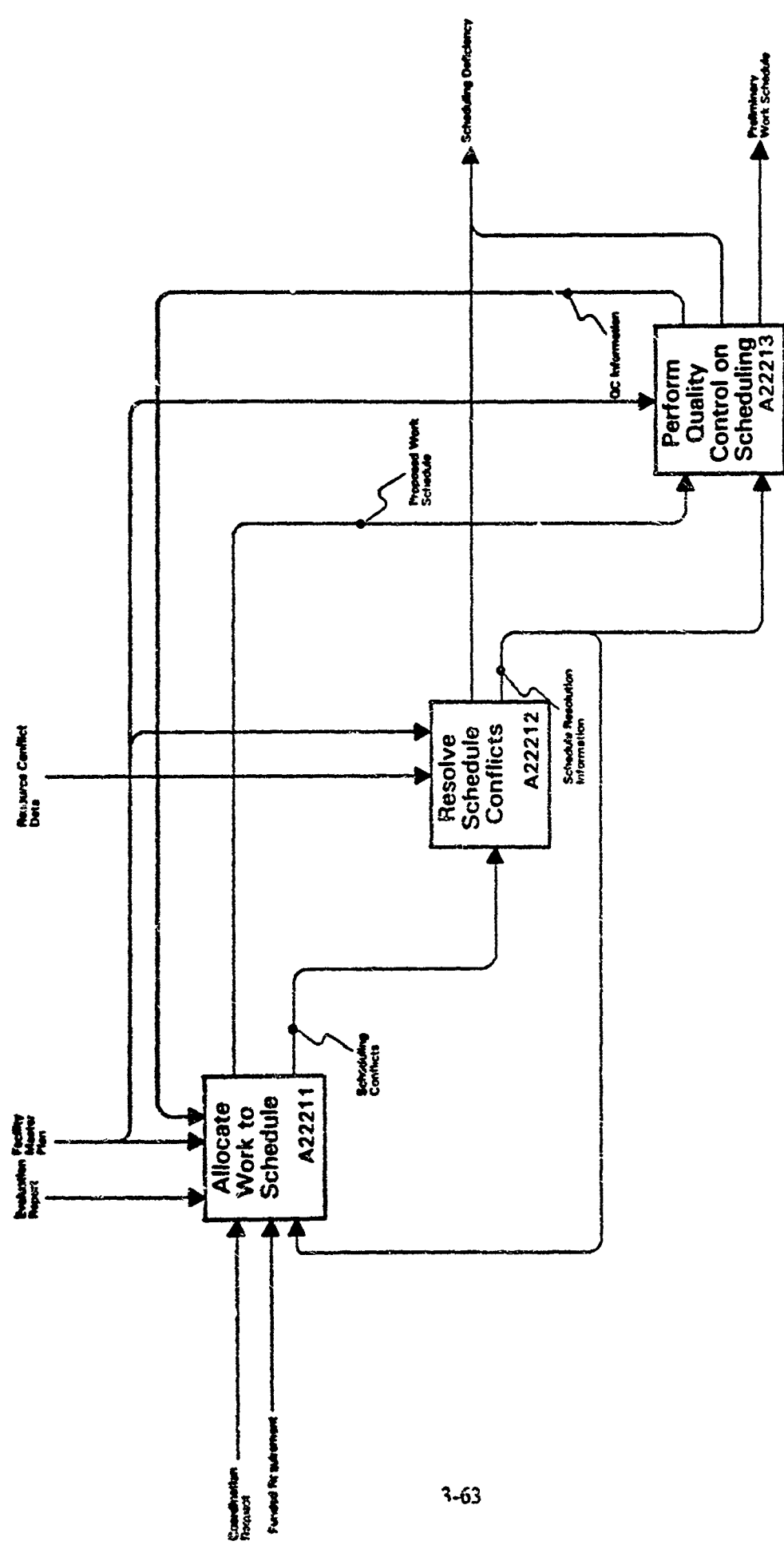
DRAFT

RECOMMENDED

PUBLICATION

DATE

CONTEXT:



NODE: A2221

TITLE: Schedule Work

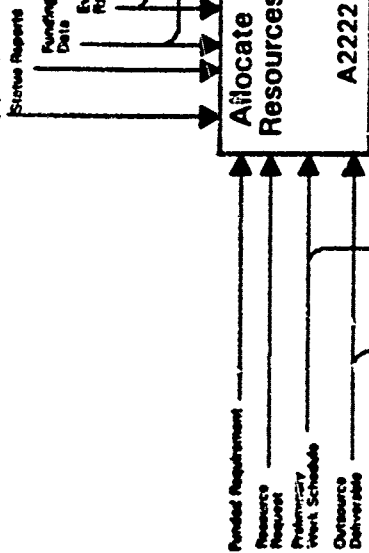
NUMBER:

A2222 Assemble Resources

All work requires resources (funds, materiel, manpower, and time). This activity allocates resources identified by planners. Additionally, needed funds, materiel, and services must be on-hand at the right time for the work to commence. If shortfalls are identified, a request is generated. Major shortfalls and conflicts are reported to schedulers and planners for resolution.

USED AT:	AUTHOR: MEDLOG	DATE: 07/01/93	WORKING	READER	DATE	CONTEXT:
PROJECT: MEDLOGTO-BE Workshop	REV DATE:		DRAFT			
NOTES: 1 2 3 4 5 6 7 8 9 10	REV:		RECOMMENDED			
			PUBLICATION			

Mission-Ready Equipment

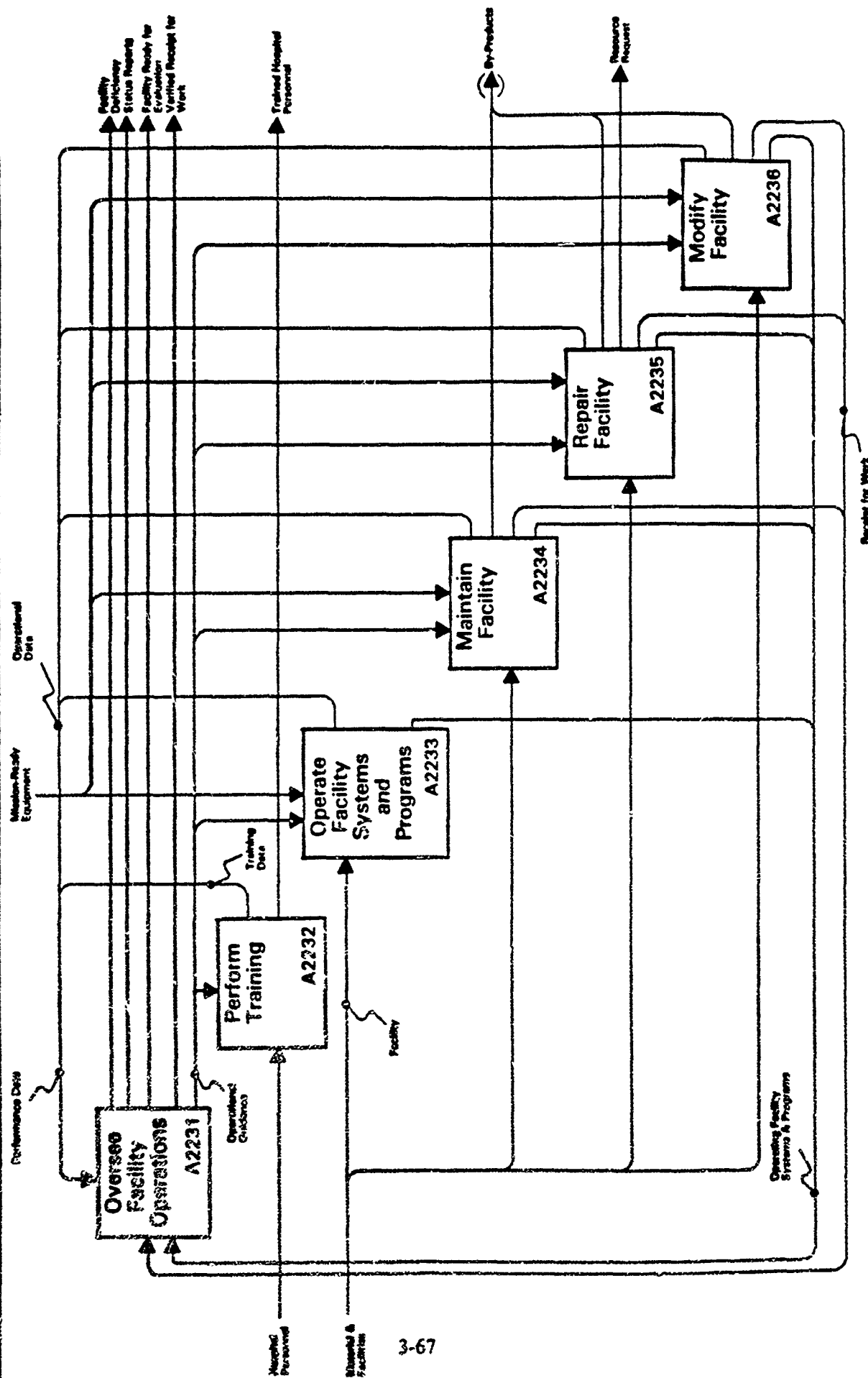


NODE: A2222	TITLE: Assemble Resources	NUMBER:
-------------	---------------------------	---------

A223 Execute Facility Operations

A vast number of operations and programs take place as directed by the Facility Master Plan. This activity is the actual work of accomplishing the plan. Oversight by facility personnel of all operations and programs is critical. To be effective, a facility must operate without interruption; function with trained personnel; and be efficiently maintained, repaired, and modified.

USED AT:	AUTHOR: MEDLOG	DATE: 07/01/93	WORKING	DATE	CONTEXT:
PROJECT: MEDLOG30-BE Workshop	REV DATE:		DRAFT		
NOTES: 1 2 3 4 5 6 7 8 9 10	REV:		RECOMMENDED		
			PUBLICATION		



NODE: A223	TITLE: Execute Facility Operations	NUMBER:
------------	------------------------------------	---------

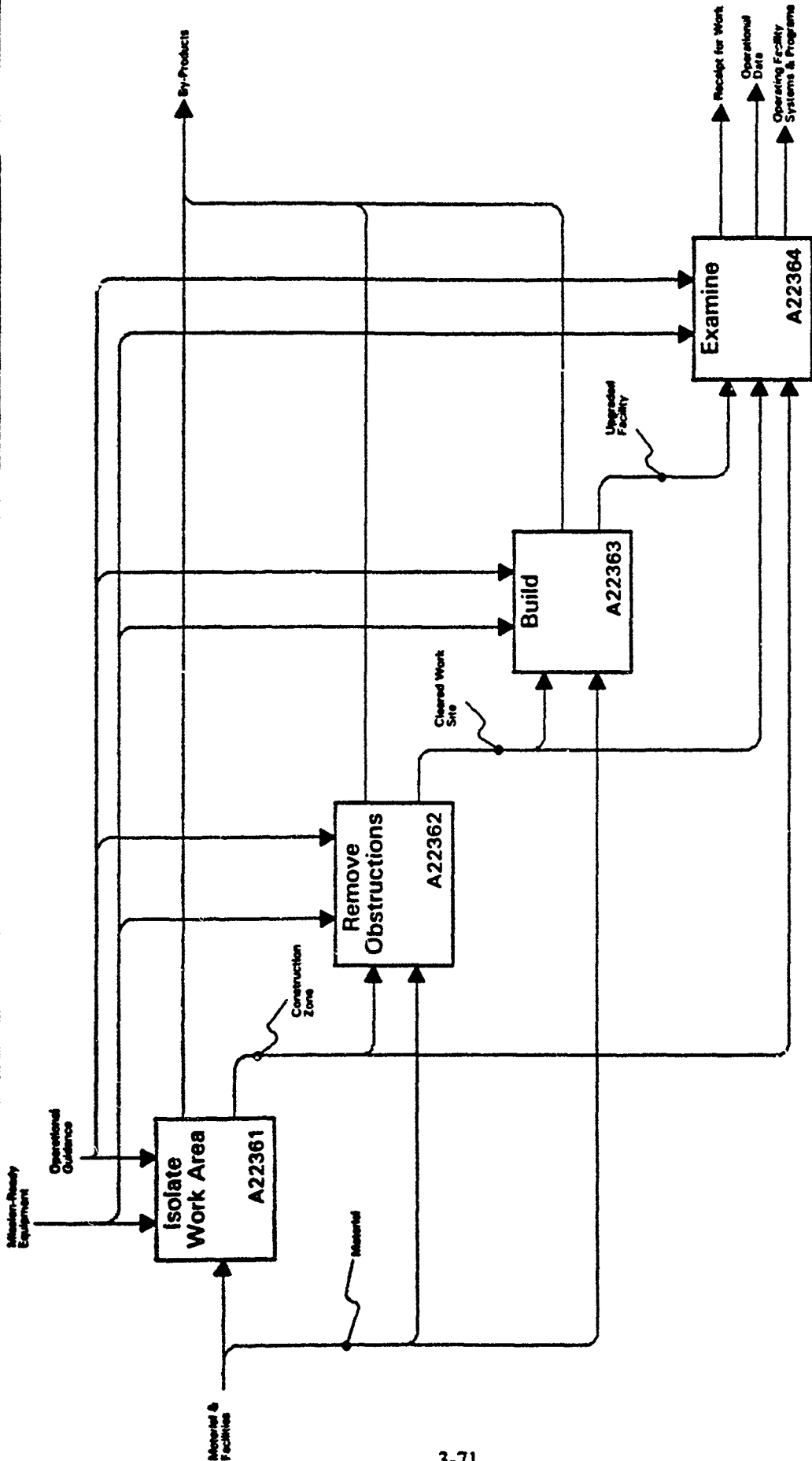
A2231 Oversee Facility Operations

Facility Operations comprise a great number of activities occurring simultaneously over a large area. Also, many operations and services are accomplished through contracts with outside entities. Such conditions make oversight a key component in effective facility management. Information from planning documents, facility operations, and ongoing inspections is analyzed; and operations adjusted, in order to maintain effective operations.

A2236 Modify Facility

Medical facilities are constantly being altered and expanded to respond to changes in regulatory guidance and improvements in health care delivery. This process includes isolating the construction work from health care services, performing the modification, and examining the finished product to ensure that it conforms to applicable construction codes and standards.

USED AT:	AUTHOR: MEDLOG	DATE: 07/01/93	WORKING	READER	DATE CONTEXT:
	PROJECT: MEDLOGTO-BE Workshop	REV DATE:	DRAFT		
	NOTES: 1 2 3 4 5 6 7 8 9 10	REV:	RECOMMENDED		
			PUBLICATION		

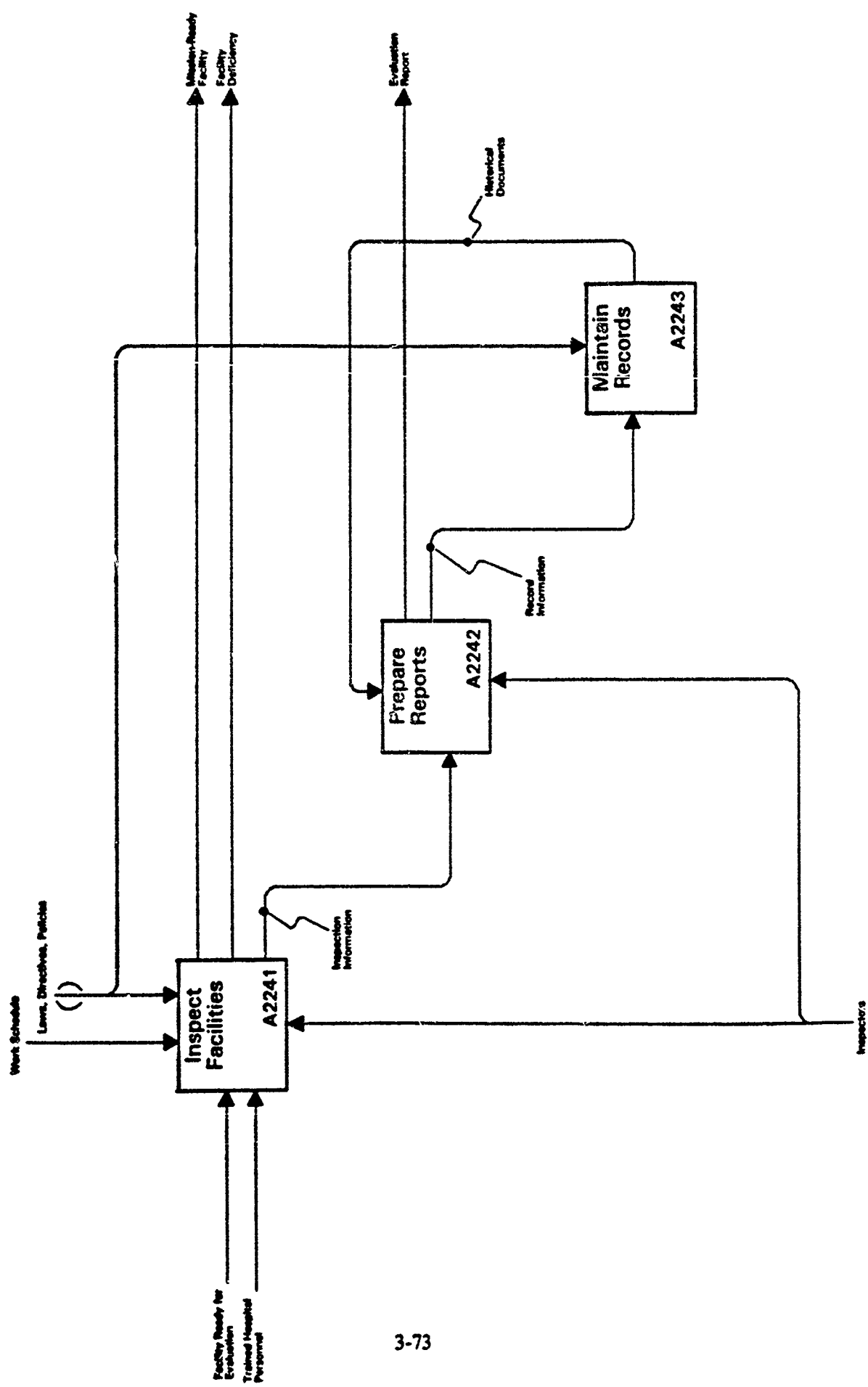


NODE: A2236	TITLE: Modify Facility	NUMBER:
-------------	------------------------	---------

A224 Evaluate Facility Operations

Military medical facilities receive evaluations and inspections from a variety of internal and external regulatory organizations, including the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO), the Occupational Safety and Health Administration (OSHA), Inspectors General, fire marshals, etc. These inspection reports verify the effectiveness of facility operations and programs and serve as an important basis for modifying facility management operations.

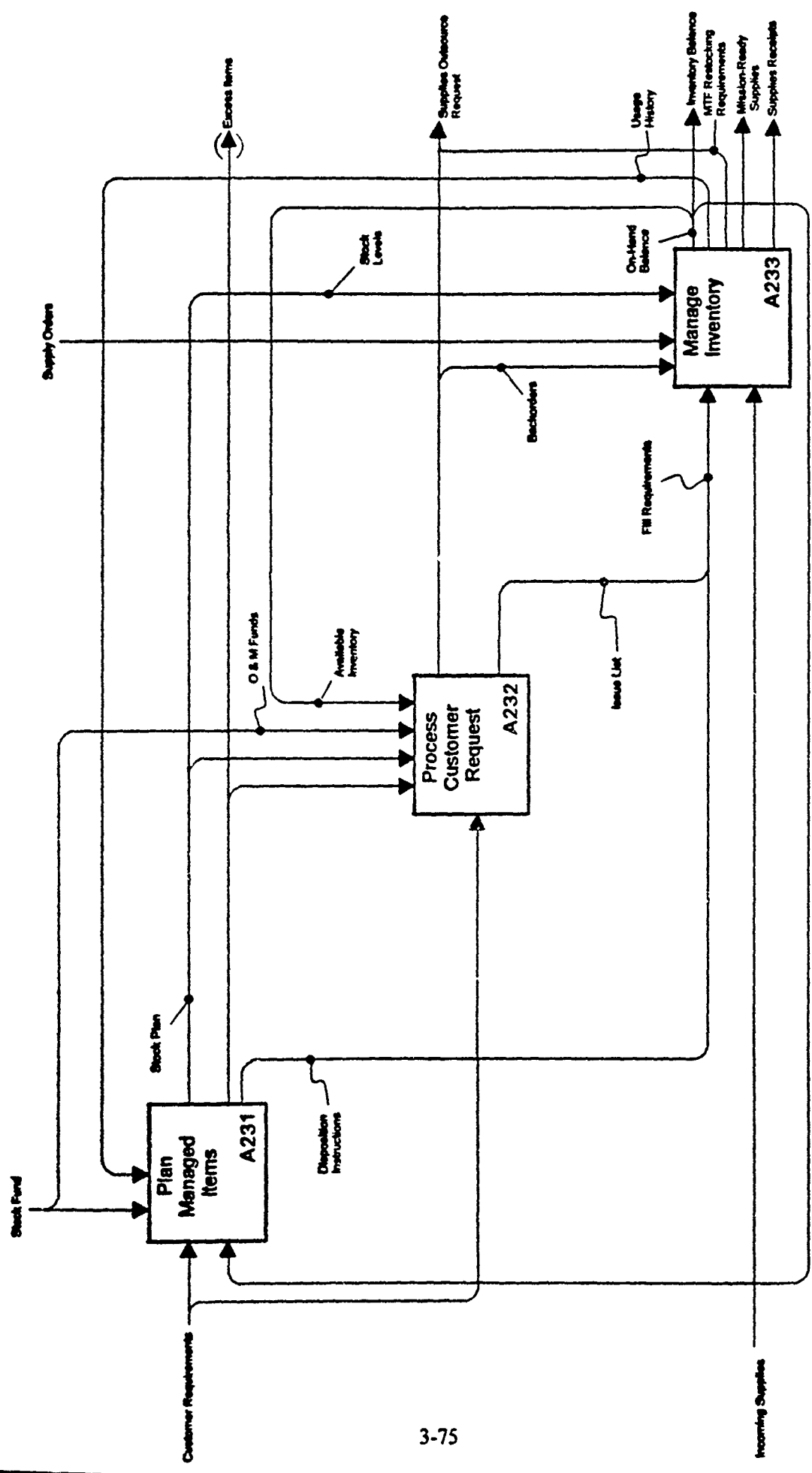
USED AT:	AUTHOR: MEDLOG	DATE: 07/01/93	WORKING	READER	DATE CONTEXT:
	PROJECT: MEDLOGTO-BE Workshop	REV DATE:	DRAFT		
	NOTES: 1 2 3 4 5 6 7 8 9 10	REV:	RECOMMENDED		
			PUBLICATION		



NODE: A224	TITLE: Evaluate Facility Operations	NUMBER:
------------	-------------------------------------	---------

A23 Provide Supplies

Provide Supplies includes the processes necessary to acquire, provide, and manage mission-ready supplies to support the medical health care mission. Plan Managed Items determines stock requirements, storage strategy, and stock replenishment; and continually evaluates managed items to ensure the appropriate items are stored and available in the correct location and quantity. Process Customer Requests provides the customer with their requirements; however, validity must be established. A series of screenings determines fund availability, suspensions, stocked or nonstocked, and available stock balances, with the end result being an issue list or a outsource request. Manage Inventory receives incoming supplies, replenishes inventory at storage locations, disposes of excess materiel, and maintains inventory balances.



A231 Plan Managed Items

In Plan Managed Items, Medical Logistics develops the most appropriate method of satisfying customers' supply requirements in a timely and cost-effective manner. Decisions to physically carry items in inventory or acquire them on an as-needed basis are based on forecasted need, usage history, storage capacity, order and ship time, cost, and available funds. Once the decision has been made to stock an item, Medical Logistics works with the potential users to establish an approximate stock level based on the same criteria as outlined above. A strategy for physically locating stocked items pending issue to customers is developed based on item characteristics (e.g., refrigerated, flammable, hazardous) and available storage space (e.g., Periodic Automatic Resupply (PAR) level shelves), bulk warehouse (for Central Processing and Distribution (CPD) or PAR level shelves), or vendors (for bulk warehouse, CPD, or PAR level shelves). Stocked items are evaluated routinely for additions, deletions, level increases, level decreases, to identify excess materiel, and to meet Quality Assurance requirements.

A232 Process Customer Request

Process Customer Request begins when the supply activity receives a customer request. The customer request is validated to ensure that it is complete, that data entered match pre-established values for specific data elements, that the customer is authorized to order specific types of supplies, that funds are available in his/her account, etc. After the request is validated, the requested quantity is compared to the available balance (either operating stock or excess) to create an issue list. If the requested item is not available, a check is made to find any available balance of an acceptable substitute. If the available balance is insufficient or no substitute is found, the customer's requested quantity is identified as an acquisition requirement and forwarded for action in the acquisition activity.

USED AT:

AUTHOR: MEDLOG

PROJECT: MEDLOG TO-BE Workshop

DATE: 07/01/93

REV:

NOTES: 1 2 3 4 5 6 7 8 9 10

WORKING

DRAFT

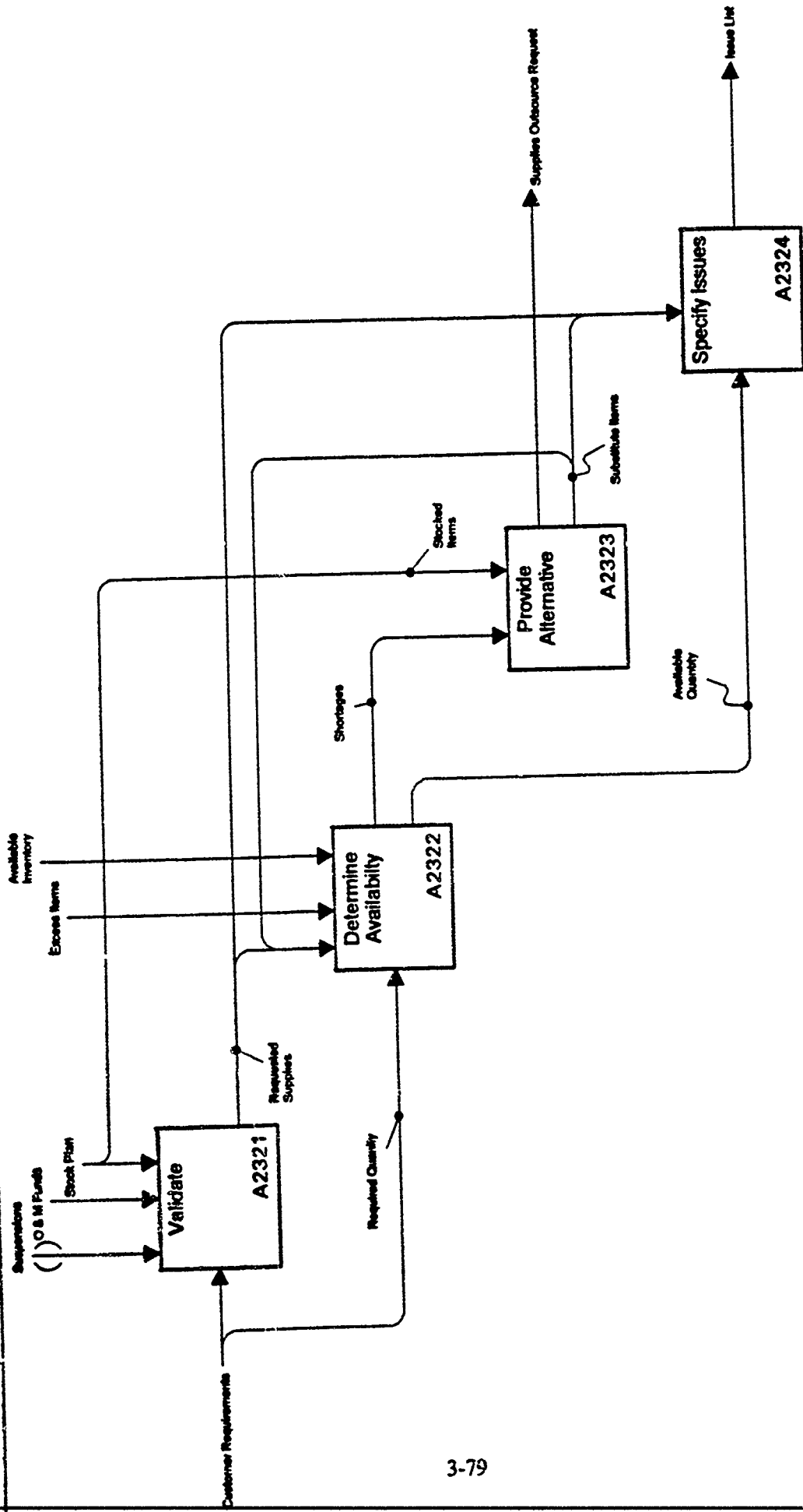
RECOMMENDED

PUBLICATION

READER

DATE

CONTEXT



A233 Manage Inventory

Manage Inventory encompasses the various processes performed from the time a supply item is received to the time of final consumption/disposition. These processes include physically managing the supply item and related paperwork. When an incoming supply item arrives, it is verified with what was ordered. Once it is accepted, it is used to replenish the supply inventory or is immediately issued to the customer. If the item is rejected, it is returned to the source based on return terms. When a supply item is received for stocking or restocking, it is stored in its designated location and may be subdivided into prescribed units of issue or measure if needed. While stored, the supply item continues to be checked for quality, shelf-life, potency, or intended use. Stock items that do not pass QA guidelines are disposed of according to regulations. When a customer request is received, the supply items required are issued from inventory. This action decreases the stock quantity and produces a replenishment action based on restocking requirements. This cycle of continually replenishing stock as supply items are issued is aimed at producing the optimal stocking levels to satisfy customer requirements.

USED AT:

AUTHOR: MEDLOG

PROJECT: MEDLOG TO-BE Workshop

NOTES: 1 2 3 4 5 6 7 8 9 10

DATE: 07/01/83

REV: 1

WORKING

DRAFT

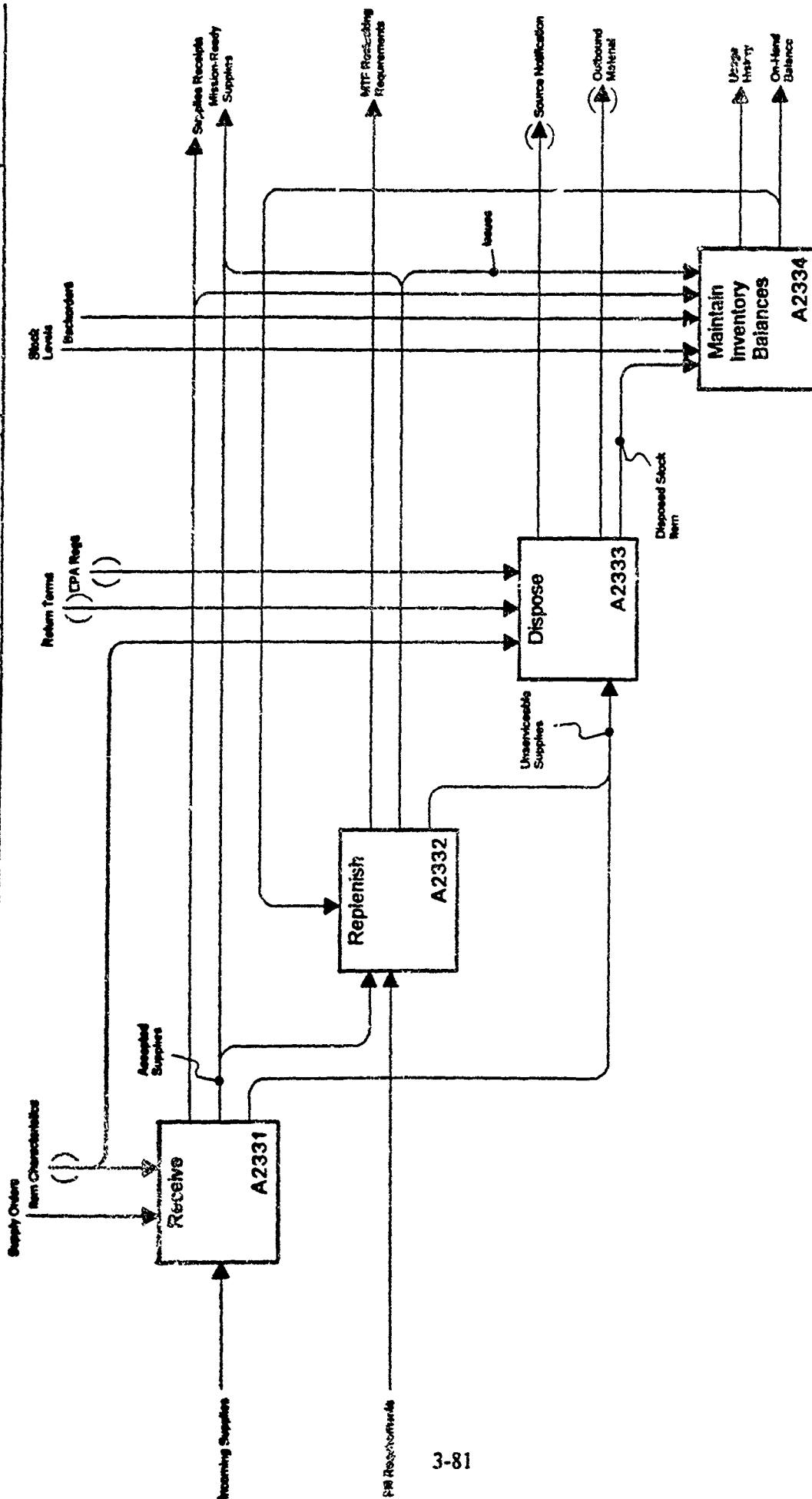
RECOMMENDED

PUBLICATION

READER

DATE

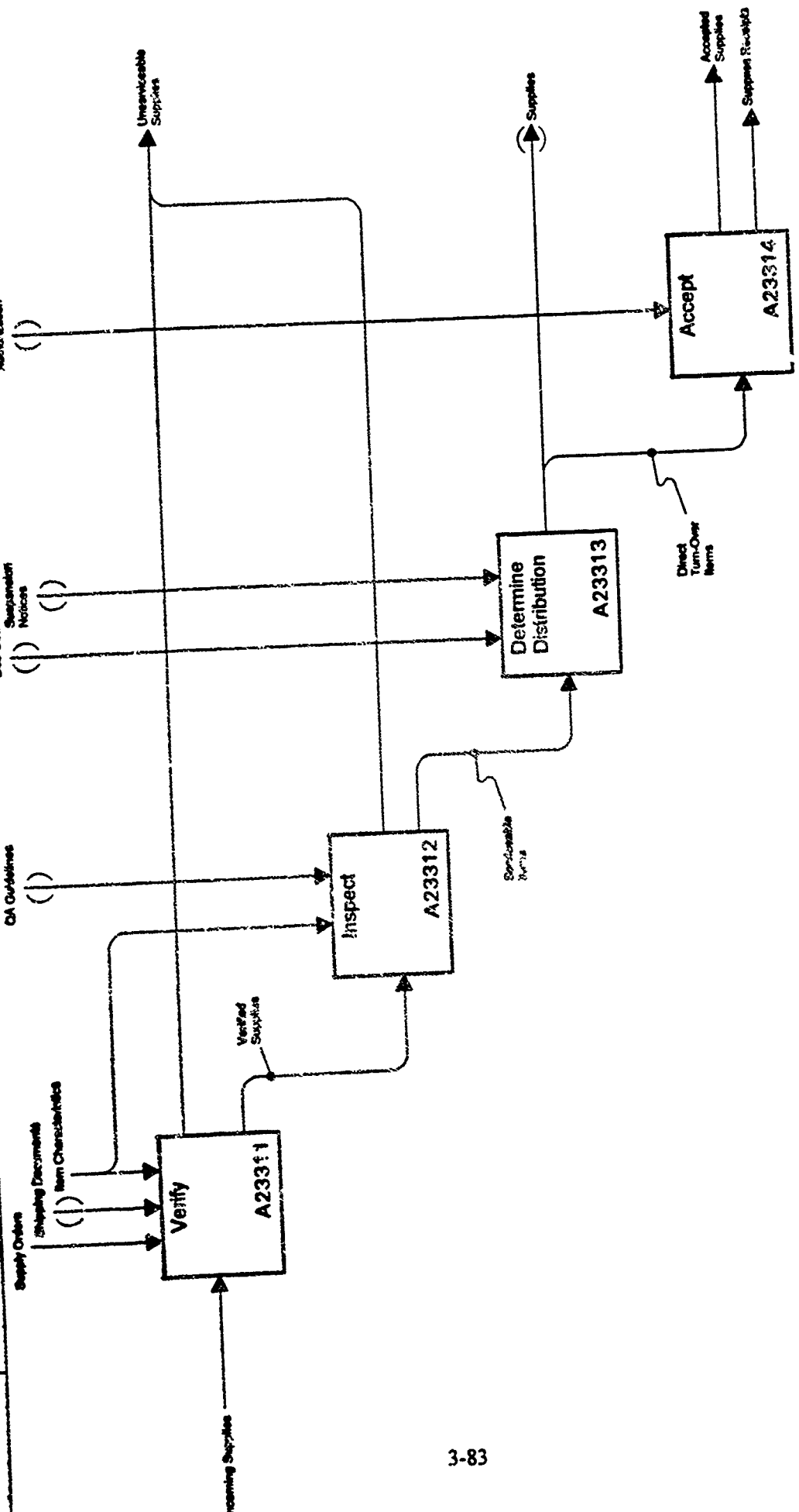
CONTEXT:



A2331 Receive

Receive includes the processes performed from the time an incoming supply item arrives at the facility until the time of acceptance. A supply item may arrive as a result of a supply order or a transfer from an outside organization. Shipping documents are verified and matched against the supply item; and if it is a supply order, the shipment is also verified against the order document. The physical properties of the supply item are checked to determine suitability for its intended use. If rejected, the supply item is returned to the source or disposed of accordingly. An item that has been verified is further inspected to ensure that it meets QA guidelines. Once it is inspected, it is verified as a serviceable item — ready for issue or use. The supply item is then delivered to a stock location or directly to a customer. Once accepted at the final destination, a receipt document is generated. The receipt increases the available balance of the managed item.

USED AT:	AUTHOR: MEDLOG										DATE: 1/8/80	ORDER NO:
PROJECT:	MEDLOG TO-BE Workshop										REV:	
NOTES:	1	2	3	4	5	6	7	8	9	10	DRAFT	
											RECOMMENDED	
											PUBLICATION	



A2332 Replenish

Replenish deals with the processes that are performed from the time an accepted supply item is stocked in inventory to the time it is issued to a customer or turned over to an outside organization. When a supply item is accepted, it increases quantity in stock inventory. It is stored at a location according to storage and location guidelines. When needed, the item is subdivided into prescribed units of issue or measure. When the supply item is issued to a customer or turned over to an outside organization, it decreases quantity in stock inventory. This decrement generates restocking requirements that are based on replenishment.

USED AT:

AUTHOR: MEDLOG

DATE: 07/01/93

WORKING

READER

DATE

CONTEXT:

PROJECT: MEDLOG TO-BE Workshop

REV:

DRAFT

RECOMMENDED

PUBLICATION

NOTES: 1 2 3 4 5 6 7 8 9 10

Replenishment Schedule

()

On-Hand Balance

Stock Locations

()

Stock Items
A23321

Determine Replenishment Rqmts
A23322

Issue
A23323

Accepted Supplies

3-85

FR Requirements

MTF Rescheduling Requirements

Replenishment Items

Warehouse Demand

Issues

Unserviceable Supplies

Issued Supplies

TITLE: Replenish

NUMBER:

A24 Acquire Materiel and Services

Acquire Materiel and Services provides for Medical Logistics to determine alternate outsource options, establish outsource options, and execute outsource options. A request for outsource service is initiated from the different logistic activities as a result of a customer requirement that has been reviewed. This activity determines which of the available options would best support the customer requirement. These options include: request for contractual procurement to an outside contracting organization, requisition to the established Government supply system, request for services under a Memorandum of Understanding (MOU) with another military organization or Component, or awarding orders to vendors (when authorized) under existing delivery order contracts (e.g., credit card, decentralized blanket purchase orders, prime vendor agreements, buying group partnerships). When necessary, a request to establish new outsource options is sent to an outside contracting agency. After the option to be used to provide the requested support is determined, an award is placed. The duties of the Contracting Officer's Technical Representative (COTR) are documented from inception of the agreement until receipt, acceptance, and payment for materiel or services received. Follow-up requirements are documented with any appropriations and disbursements. An internal data are collected and provided to the Standard Materiel Accounting system for inclusion in obligations and disbursements. An internal evaluation is maintained on the performance and execution of outsource services for future use in requesting additional service.

CONTEXT!

RECOMMENDED



A3 Manage Information

When a request for logistics information is received, the request is verified to ensure it is from an authorized customer and does not violate security classifications or other restrictions to access. If the request violates access rules, it is rejected. Authorized requests are accepted for appropriate processing. Information is provided immediately if available. Medical logistics information received from the internal activities is collected and updated. Some information may be purchased to supplement existing information. Once the requested information has been collected, it is analyzed and applicable data extracted into an assimilated package. The assimilated package is incorporated into a form the customer has requested, and the available information provided. When information becomes outdated or no longer required, it is discarded.

3.8 Medical Logistics Activity Model Activity Descriptions

A0 Provide Medical Logistics Support

Provide Medical Logistics Support includes all the various activities necessary to support health care delivery. These activities consist of managing funds, performing medical logistics, and managing information.

A1 Manage Funds

Manage Funds is the process of requesting necessary Operations and Maintenance (O&M) funds to conduct the logistics business, requesting Defense Business Operations Funds (DBOF) to maintain the revolving operations, managing O&M funds belonging to the customers, assigning available funds to documents upon issue of materiel, and administering the finances necessary to provide interface to the DoD standard accounting and finance systems.

A11 Request Funds

This activity involves determining, justifying, and submitting funding resource requirements within DoD. To determine funding requirements, individual needs are added in like accounting classifications or appropriations. Justification is a narrative description to support the total requirement in each accounting classification. These requirements are then submitted through the appropriate comptroller channels. Requested funds may consist of Operations and Maintenance (O&M) funds (including Real Property Maintenance Activity (RPMA) fund), Defense Business Operations Fund (DBOF), Military Pay, Other Procurement, and Military Construction (MILCON) appropriations.

A111 Determine Requirements

Determine Requirements is the process of identifying non-DBOF funding requirements or shortfalls that are necessary for the delivery of health care services and products.

A112 Justify Requirements

Justify Requirements is the process of assembling the documentation necessary to support the requirements to provide health care. Inputs are derived from budgeted items submitted by cost center managers required to support their product lines. Outputs are in the form of validated budget items.

A113 Submit Request

Submit Request is the process of submitting a Command-approved budget package to a higher headquarters for the purpose of conducting the operations of an enterprise. Validated budget items are prioritized in the event resources are not available to support all phases of the operation.

A12 Prepare DBOF Operating Plan

This activity involves determining inventory targets from the DoD Secondary Item Stratification Report, calculating customers' anticipated sales programs, defining assigned War Reserve Materiel (WRM) missions and applying available assets, and producing an Operating Plan to implement the execution of the planned monthly inventory positions and obligation program.

A121 Determine Operating Requirements

This is the process that determines the operational inventory dollar requirements for safety level, backorders, quantities used during the Economic Order Period, and order ship time. These dollar values are smoothed with known changes to the operating mission.

A122 Determine Sales Program

This process identifies the anticipated sales programs from the supported activities for the budget year. Significant changes in anticipated sales programs are verified.

A123 Determine WRM Requirements

Using the War Plans, Operations Plans, information received from the FDA extension program, and the assigned wartime mission, war reserve materiel dollar requirements are identified.

A124 Develop Program Plan

This activity is concerned with identifying how the annual program will be executed during the year. This will be tempered by any known fiscal limitations such as quarterly allocations if a fund is apportioned.

A13 Assign Funds

This activity is concerned with matching validated unfunded requirements with received funds. It also identifies requirements not funded, which must be revalidated, and funds reprogrammed or additional funds requested.

A14 Administer Finances

Administer Finances includes managing fund authorizations, maintaining fund balances, and reporting financial transactions through the financial systems. Factors in this activity are providing financial information and reports to customers or higher echelons; performing internal financial processes; and processing financial paperwork transactions that trigger payments to be disbursed as a result of acquiring supplies, equipment, facilities, and services ordered, received, and accepted.

A141 Manage Funds Authorizations

Manage Funds Authorizations is the process of reading Comptroller reports and guidance, and responding to those that affect the fund authorization balances and to any expiration dates of fund authorizations.

A142 Maintain Fund Account Balances

This activity is concerned with the updating of any fund balances as a result of processing transaction documents. Some of these are receipts, obligations, commitments, accounts receivable, accounts payable, items in a billed-not-received status, items in received-not-billed status, dollar value of obligated and unobligated due-outs, issues, and turn-ins with credit or without credit.

A143 Report Financial Transactions

This activity documents those actions that do not update fund balances, such as gain and loss transactions, restratification of inventory, etc. All documents are formatted into the DoD standard accounting system format or are used for General Ledger updates and other internal or external reporting.

A2 Perform Medical Logistics

This activity includes the processes involved in providing the necessary equipment, facilities, supplies, and services needed to support health care delivery.

A21 Provide Medical Equipment

This activity ensures the availability, reliability, sustainability, and readiness of equipment needed for the medical mission. Some of the processes incorporated in Provide Medical Equipment are identifying and reviewing requests, acquiring equipment, accounting for equipment, maintaining equipment, and redistributing or disposing of equipment. Equipment is ordered when specific requirements are identified, validated, approved, and funded. Periodic maintenance is performed to ensure equipment is maintained in a mission-ready condition and is made available to meet customer needs.

A211 Identify/Review Requirements

Identify/Review Requirements assesses customer requests for equipment resources. Several of the primary elements in this activity are receiving customer requests for equipment, maintenance, and/or disposal; helping customers develop requirements; ensuring that items are properly identified and justified; performing a technical review of requirements; validating estimated acquisition costs; determining whether excess assets are available to satisfy the requirement; consolidating requirements packages for submission to the Equipment Review Committee or approval authority for prioritization and funding authorization; identifying that requirements for Total Package Fielding (TPF) are identified and programmed; and establishing and integrating recommended priorities for acquisition in the event of insufficient funding.

A2111 Assist the Customer

Helping the customer submit a complete equipment requirements package is the key element within Assist the Customer. This activity includes the submission of all proper documentation required by local procedures and higher authority. Other elements involved are coordination with sources inside and outside the medical treatment facility, and research and identification of fully justified requirements. Assistance may also be provided relating to a customer's request for maintenance, redistribution, or disposal of equipment. Once a customer's requirement has been fully identified, it is submitted as a requirements package for evaluation and further review.

A2112 Evaluate Requirements

This activity evaluates the customer requirements package to assess proper justification, additional manpower resources, spare part support, maintenance capability, consumable supplies, and any facility alterations and applicable costs required to make the equipment operational. An additional consideration is to determine if existing excess serviceable assets are available for redistribution to satisfy a requirement.

A21121 Assess Authorization

Assess Authorization ensures that customer requests are based on current clinical guidance and meet technology standards. Cancellation or rejection can occur based on improper documentation or determination that a request is not necessary to support mission requirements.

A21122 Analyze Cost/Benefit

This activity determines the payback potential of an equipment purchase by comparing life-cycle costs (including support requirements) and increased in-house patient care capabilities to other methods of acquiring comparable patient care, e.g., Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), other DoD Activities, Department of Veterans Affairs (DVA)/United States Public Health Services (USPHS). This process also compares different models or manufacturers of similar equipment.

A21123 Assess/Review Support Requirements

After a Customer Requirements Package for equipment has been analyzed and authorized, a review of all support requirements is made and added to the package. These requirements may include but are not limited to facilities, maintenance, personnel, supplies, and training (i.e., operator and maintenance).

A21124 Determine Funding Requirements

This activity involves determination of funding source(s) for a particular equipment acquisition. Funding sources include: Operations and Maintenance (O&M) funds (including Real Property Maintenance Activity (RPMA) fund); Defense Business Operation Fund (DBOF) authorization; Military Pay; Other Procurement (OP); and Military Construction (MILCON) appropriations.

A2113 Document Priorities

This activity documents and provides the supporting paperwork for the recommended prioritization of reviewed customer requirements packages. The prioritization process is influenced by several factors including mission criticality; urgency of need; total cost; and existing equipment maintenance history, condition, and age. These prioritized requirements packages are then submitted for approval and funding using operating targets or other procurement allocations.

A2114 Obtain Approval

This activity obtains the required final approval for acquisition from local and higher authority, based on the dollar value of the equipment from the DoD, Service, and local procedures and policies. Further constraints on the acquisition of these prioritized requirements are the availability and authorization of sufficient funding. Acquisitions over \$1,000,000 include submission for approval at the DoD Health Affairs (HA) level and coordination at the regional level.

A212 Acquire Equipment

This process includes the acquisition of validated funded equipment requirements to the point of delivery of the equipment. The key elements in this process are the aggregation of funded requirements, selection of acquisition strategy, preparation of supporting documentation (e.g., specifications, performance evaluations), and monitoring of the procurement action status through completion of physical delivery at the destination. When necessary, the acquisition of equipment also includes coordination of related requirements such as facility site preparation, installation of equipment, personnel training, and coordinating for initial acceptance inspections.

A2121 Determine Acquisition Strategy

This activity involves consolidating similar equipment requirements (e.g., DoD Shared Procurement Program), ensuring that the acquisition package is fully funded and completed for submission to the ordering activity, and ensuring that associated TPF resources are incorporated in the acquisition planning strategy. This activity may result in an outsource request.

A2122 Monitor Procurement Status

Monitor Procurement Status reviews the acquisition status of ordered equipment and associated TPF resources. The main elements involved are periodic follow-up with the ordering organization and coordination for delivery and/or installation of equipment.

A2123 Receive Equipment

The receipt activity spans the period from the time the equipment arrives until property accounting records are initiated. The received equipment may have originated from outsource agreements or redistribution of existing assets. When equipment is received, the shipping manifest document must be verified for accuracy.

A213 Account for Equipment

This activity documents equipment assets and properly identifies, safeguards, and assesses visibility of equipment. Property custodians are assigned to custodial accounts upon issue of equipment. Appropriate property tags are affixed to each equipment item. This process also involves recording changes in equipment balances on the official property accounting records. Changes may result from equipment issues and transfers among equipment custodial accounts. Accounting records are also maintained to reflect equipment items on loan and those available for loan. Property control numbers are assigned during the issue process for individual identification of each item of equipment. Property control numbers are also used to update custodial and maintenance records.

A2131 Establish Accountability

This activity assigns a property account number to a property item and completes a property record (e.g., manufacturer, date of manufacture, acquisition cost, model, serial number, nomenclature, requisition number). The property account number tracks the custodial responsibility.

A2132 Maintain Equipment Location

This activity tracks the physical location of an equipment item. This is accomplished by periodic physical inventory of property, custodian reassignment, turn-in, and inventory adjustment (i.e., gains and losses). This also entails the accounting for equipment as it is moved within the organization.

A21321 Maintain Customer Account

This activity safeguards and maintains visibility of equipment. Customer accounts (including the home loan program) are established, modified, and deleted as appropriate. Property custodians are responsible for maintaining information about who is authorized to request equipment repairs, transfer of equipment, and adjustments to equipment records. Property custodians are also responsible for equipment forecasting.

A21322 Conduct Physical Inventory

This activity performs routine and special inventories of equipment assigned to a property custodian to include equipment in the home loan program. Automated and manual procedures are used to physically locate equipment. Physical locations are updated as a result of the inventory procedure.

A21323 Reconcile Inventory

This activity reconciles the physical inventory with the existing equipment records to determine any discrepancies. Discrepancies must be resolved prior to a reconciled inventory. These resolutions can include transferring equipment to or from another custodian's account, Reports of Surveys, etc. The property account is reconciled after all custodian accounts have been inventoried according to current regulations.

A2133 Redistribute/Dispose of Equipment

This activity identifies and reports serviceable and unserviceable excess equipment, determines condition code, and determines and executes the appropriate disposition action. This process may involve redistributing and shipping excess assets to another organization, or submitting these assets to a Defense Reutilization and Marketing Office (DRMO) for further redistribution, sale, or disposal.

A214 Maintain Equipment

Sustaining equipment in a mission-ready posture incorporates the following factors: coordinating for the installation of the equipment; performing or arranging for the inspection, repair, and service of equipment; training users and service technicians in safe and effective equipment maintenance; analyzing and reporting occurrences of hazardous incidents connected with the use of equipment; communicating, correcting, and documenting action on product recalls and hazard alerts affecting equipment; and archiving historical maintenance records.

A2141 Plan Maintenance

This activity identifies service and resource requirements for projected new equipment, as well as on-hand equipment requiring scheduled or unscheduled service. Maintenance supplies and support equipment (test/calibration) for sustaining equipment in a mission-ready posture are also identified and placed on order. Work orders are established and closed to update equipment history and equipment data files. Training requirements for operator and maintenance personnel are also identified.

A21411 Establish/Review Equipment Requirements

Upon approval of a new equipment request, customer requirement, or funded requirement, service and maintenance requirements are identified based upon service history and current technology (including maintenance supplies and support equipment).

A21412 Develop Service Plan

This activity develops an integrated service and work schedule based upon individual equipment requirements, resource availability (in-house and outsource), training, and both current and projected workload. In addition, service histories are continually reviewed to update workload schedule and subsequently update service plan/schedule.

A21413 Establish/Close Work Order

This function includes the generating scheduled and unscheduled work orders. The individual work load, equipment priority, overall shop production, and the service schedule are taken into account to complete this task. Completed work orders are closed and maintenance history data are transcribed to the equipment records. Outsource requests for service are also produced.

A21414 Develop Training Requirements

This activity identifies operator and service training requirements based upon new equipment projections, historical maintenance data, operator error, and current usage trends of equipment. The training can be either an in-house or outsourced requirement for operation or maintenance.

A2142 Perform Initial Inspection

Upon receipt of equipment into the medical system, the following activities occur under Perform Initial Inspection: perform safety inspection checks, perform operational checks of equipment, calibrate the equipment, establish equipment maintenance records in the equipment database, and verify that the items received match specifications in the procurement document.

A21421 Verify Shipment

This activity validates line item receipt of materiel as stated in the procurement document. Any discrepancies are reported. When installation is provided by the contract, work order (in-house and/or outsource) requests are initiated. If training is required, the training request should be initiated at this time to ensure availability of all appropriate personnel.

A21422 Assemble/Install Equipment

This activity assembles, installs, and places the received equipment in operational status. If additional resources are required, a facility or outsource request may be initiated.

A21423 Perform Operational Test

This activity is concerned with ensuring that an equipment item operates within the manufacturer's specification and is acceptable for its intended use. Safety checks and calibration verification are also conducted.

A21424 Establish Maintenance Accountability

This activity establishes the maintenance record. The maintenance program requires the recording of the following data elements to ensure accountability: warranty expiration date, maintenance personnel level, risk level, and any support parts associated with the equipment that may be required during the life of the equipment for scheduled service or repairs.

A2143 Perform Scheduled Services

This activity involves conducting scheduled maintenance services required to maintain equipment in a mission-ready status. This incorporates performing regular safety testing, performance testing, calibration checks, systematic servicing, parts replacement, minor repairs, cleaning, detection of potential equipment malfunctions, and recording these actions in an equipment maintenance history record.

A21431 Inspect Safety Items

This activity involves a mechanical and electrical safety inspection of the equipment item to ensure operator and patient safety.

A21432 Check Performance

The equipment is checked to ensure stated manufacturer performance standards are met. If the standards are not met, calibration or minor repairs are completed to return equipment to optimum operational status.

A21433 Perform Required Maintenance

This is the systematic servicing of equipment to ensure its useful life and reduce the incidents of unscheduled maintenance. This may include lubrication, cleaning, parts replacement, and minor repairs.

A2144 Repair Equipment

This function entails conducting equipment repairs as a result of deficiencies noted during scheduled preventive maintenance or unscheduled maintenance action requested by an equipment user. The repair action will produce safe, usable, and mission-ready equipment. When determining the practicality of repair, factors such as age, item type, projected life expectancy, replacement cost, obsolescence, past repair history, repair cost, and urgency of need are considered.

A21441 Inspect Equipment

This activity involves conducting a visual and/or operational inspection of equipment that has a reported fault. During this activity, the repair technician searches for obvious faults such as broken wires, dirty connections, foreign objects, broken mechanisms, and improper operation or additional unreported faults.

A21442 Determine Equipment Malfunction

This activity entails troubleshooting faulty equipment to determine the faulty component or part. This includes removing protective cases or covers to allow visual access to mechanisms and electrical circuits. During this activity, technical publication and diagnostic instruments are used to pinpoint the cause of the equipment malfunction. This determination results in equipment being assigned a condition code as serviceable or unserviceable.

A21443 Correct Equipment Malfunction

During this activity, the faulty component or part is repaired or replaced to produce safe, usable, and mission-ready equipment. This activity includes fully or partially disassembling the equipment, removing and replacing faulty parts, repairing the faulty component, and reassembling the equipment. This activity produces repaired equipment.

A2145 Train Users

This activity includes arranging equipment training for biomedical equipment repair personnel and customers. Biomedical equipment repair training covers operation and servicing. Customer training is based on operational needs (does not include clinical applications).

A22 Manage Medical Facility

This activity ensures the availability, reliability, sustainability and readiness of facilities needed to support the medical mission. The main activities of Manage Medical Facilities are planning, coordinating, executing, and evaluating facility operations. Periodic maintenance and repair, minor construction, and operational programs are developed and executed to maintain mission-ready facilities in support of the medical mission.

A221 Plan Facility Operations

Plan Facility Operations includes collecting and analyzing facilities-related information in order to prepare the facility master plan. This planning effort includes, but is not limited to: assessing requirements, identifying needed resources, and prioritizing and programming activities. Planning Facility Operations encompasses fire/safety management, resource protection, communications, waste management, preventive maintenance, repair work, facility renovation, and minor construction.

A2211 Assess Requirements

Assess Requirements evaluates customer requests for facility support and services. This includes, but is not limited to: evaluating requests using specific guidance, examining deficiencies, and determining the request's disposition.

A22111 Evaluate Request

Every request is reviewed according to mission requirements, laws, regulations, JCAHO standards, building code requirements, and local regulations and policies as a basis for establishing the need. The evaluation is "unconstrained"; that is, the availability of resources like money or personnel or the ease of making the change is not considered.

A22112 Examine Deficiency

A physical inspection of an existing facility operation or system that may require replacement or modification. Examining or inspecting that operation/system allows a more knowledgeable and objective evaluation of a need.

A22113 Determine Disposition

This activity comprises an analysis of the outcome from the evaluation activity that results in the customer request either being approved or rejected/cancelled.

A2212 Identify Resources

Facility management personnel identify the resources that are needed and available to operate, maintain, repair, alter, or improve the facilities under their control.

A22121 Consult Guide Documents

This is the act of researching documentation such as standard bills of materials, to determine what resources are normally or usually required for a project or program.

A22122 Review Historical Data

This activity includes a review of historical records in order to identify resources needed to accomplish identical or similar work in the same geographical region, state, city, or installation as the proposed work.

A22123 Determine Available Resources

This activity compiles a listing of all time, manpower, materiel, and funding available to the facility manager.

A22124 Establish Resource Alternatives

This activity considers the feasibility of various resource options, such as using more people or paying more money for overtime to reduce the amount of time needed for a requirement.

A2213 Program Activities

Program Activities is the overall identification and scheduling of facility activities that need to be accomplished. This activity establishes facility management's responsibilities and direction. It includes project development, creating and updating the Facility Master Plan, and cataloging recurring work. A prioritized list of all authorized work activities is prepared and disseminated in the form of a Facility Master Plan. The master plan forms the basis for assessment and resource allocation over a period of time, usually 1 to 5 fiscal years.

A22131 Develop Projects and Programs

This activity assesses policies, guidance, laws, and directives to establish requirements for programs and project development. Develop Projects and Programs proposes recurring work schedules, local policy changes, project alternatives, and other requirements by selecting the most appropriate solution to a problem, and refining the program and/or project to address its execution in minute detail.

A221311 Generate Project Alternatives

This activity considers and lists all feasible ways of accomplishing a project/program, based on resource constraints and impact on mission.

A221312 Select Alternative

This activity identifies the most appropriate choice for accomplishing a project or program.

A221313 Refine/Design Alternative

This activity creates technical design specifications, validates the scope, and defines criteria and changes that affect the existing program and/or project alternative.

A22132 Prioritize Requirements

This activity establishes a priority list of all approved requirements, ranked in order of their relative importance to the goals of the responsible or using organization.

A22133 Update Facility Master Plan

This activity is the iterative process of reviewing the operation of all facility programs and systems and adjusting the established Facility Master Plan to respond to change.

A222 Coordinate Facility Operations

Coordinating Facility Operations is the assembling and scheduling of personnel, equipment, tools, and materials needed to complete authorized work.

A2221 Schedule Work

This activity arranges requirements to be accomplished chronologically on a schedule and sets time constraints for deliverables. It includes Allocating Work to a schedule, Resolving Schedule Conflicts, and Performing Quality Control.

A22211 Allocate Work to Schedule

This activity is the thoughtful application of required work, in priority, to discrete blocks of time so as to efficiently accomplish as many activities as possible.

A22212 Resolve Schedule Conflicts

This activity solves scheduling problems by relocating activities within the schedule, or by coordinating with the facility operations planning staff.

A22213 Perform Quality Control on Scheduling

This activity verifies that the Work Schedule complies with the Facility Master Plan. Deficiencies are identified and passed back to the facility operations planner for information/resolution.

A2222 Assemble Resources

This activity arranges for all resources to be in the right place at the right time to allow the execution of facility operations. When resources are not available, an outsource request to acquire the resources is prepared.

A22221 Allocate Resources

Where resources are ready and available, this activity plans for their use during the period shown on the Work Schedule.

A22222 Identify Shortfalls

This activity recognizes that a particular part, item of materiel, or other resource cannot be on hand at the time required on the Work Schedule. Adjusted resource requests are prepared seeking needed resources from outside the organization. If necessary, Resource Deficiency and/or Resource Conflict Data are sent back to the planners for resolution.

A22223 Request Resources

This activity orders and plans the timely delivery of parts, materiel, and other resources not presently on hand.

A2223 Verify Financial Obligations

This activity verifies funds allocated for services rendered by an outside organization as well as funds committed for future work.

A223 Execute Facility Operations

Execute Facility Operations is the actual work of accomplishing medical facilities requirements, including maintenance, repair, alterations, minor construction oversight, and training.

A2231 Oversee Facility Operations

This activity provides oversight for all operations that are conducted within the facility. When questions arise that can be handled on site, operational guidance is given.

A22311 Analyze Facility Operations

This activity evaluates data from the performance of training and facility operations and programs.

A22312 Adjust Facility Operations

This activity performs minor adjustments to a facility operation or program to bring it within limits established by the Facility Master Plan.

A22313 Inspect Systems and Programs

This activity systematically reviews specific components of facility operations for compliance with operational guidance and other directives.

A2232 Perform Training

This activity encompasses all actions necessary to conduct training programs and courses to satisfy the requirements of facility programs.

A2233 Operate Facility Systems and Programs

This activity encompasses the activating, monitoring, and analyzing of facility systems and programs. Minor adjustments are made as necessary.

A2234 Maintain Facility

This activity is performed to keep facility systems operating at peak efficiency. Both preventive (scheduled) and unscheduled maintenance occur on an ongoing basis.

A2235 Repair Facility

This activity includes replacing parts or mending damage as necessary to bring a failed system back into acceptable operation.

A2236 Modify Facility

This activity includes renovations, additions, alterations, and replacement of facilities or their components.

A22361 Isolate Work Area

This activity separates the work area from adjacent operational areas.

A22362 Remove Obstructions

This activity exposes the work site to expedite new work by taking away impediments such as walls, pipes, etc.

A22363 Build

This activity includes the installation of building materials and components.

A22364 Examine

This activity comprises phased inspections of the work during the build activity to determine the quality of construction.

A224 Evaluate Facility Operations

This activity compares and categorizes, on a recurring basis, the goals and objectives of the Facility Master Plan to the actual results in order to improve each successive iteration of the planning process. Many evaluation criteria are used, including JCAHO standards; building codes; and other laws, directives and regulations.

A2241 Inspect Facilities

This activity conducts periodic evaluation of facility programs and systems. This may be a complete and thorough analysis by an outside inspection team or internal evaluations completed by in-house staff.

A2242 Prepare Reports

This activity prepares findings pertaining to an analysis of facility programs and systems. This may be a report prepared by an outside organization or internal reports provided on a recurring basis or as needed.

A2243 Maintain Records

This activity compiles reports and information to provide a performance history and/or evaluation of facility systems and programs. These data provide a historic reference for future use.

A23 Provide Supplies

This activity includes the processes necessary to acquire, provide, and manage mission-ready supplies to support the medical health care mission.

A231 Plan Managed Items

Plan Managed Items is the process of making decisions as to which supply items will be maintained in inventory with a minimum established level of one, where the items will be stored, and how the customer's supply needs will be satisfied.

A2311 Determine Stock Requirements

Determine Stock Requirements is the process of making a decision on which items will be maintained in inventory and at what level they will be maintained.

A2312 Determine Storage Strategy

Determine Storage Strategy is the process of selecting the physical location or locations in which items will be stored and maintained pending issue to customers.

A2313 Develop Replenishment Scheme

Develop Replenishment Scheme is the process of establishing a plan for replenishing stock in all areas where supplies are stored and maintained pending issue to customers.

A2314 Evaluate Managed Items

This activity ensures that the appropriate items are stored and available in the right location and quantity.

A232 Process Customer Request

This activity includes validating the customer's request, forwarding the validated request to determine the item availability, checking for alternative or substitute items when necessary, and generating an issue list.

A2321 Validate

This activity involves validating the customer's requirement to ensure availability of customer funds, checking the item against the suspended item file, validating customer authorization, determining whether the item is stocked or nonstocked, and ensuring that information concerning the requirement is complete and accurate (e.g., unit of issue, quantity, nomenclature).

A2322 Determine Availability

Determine Availability is the process of comparing a validated customer requirement for a stocked item against available inventory balances. Items with an available quantity are forwarded to the issue activity. Items with a deficient available quantity produce acquisition requirements.

A2323 Provide Alternative

Provide Alternative is the process of screening a customer requirement to determine if there is an available substitute to satisfy the need. This process is normally accomplished after it has been determined that there is an insufficient available inventory balance of the requested item.

A2324 Specify Issues

Specify Issues is the process of identifying specific items and quantities to be pulled from stock and issued to the customer. It is during this activity that an issue list is prepared to be forwarded to the storage location for action.

A233 Manage Inventory

Manage Inventory includes the processes or activities that are performed by Medical Logistics in the control and administration of stocked items from time of receipt to time of consumption or disposition.

A2331 Receive

Receive is the process of verifying and inspecting incoming supplies for acceptance or rejection.

A23311 Verify

This activity compares delivered containers to the shipping manifest for accuracy of quantity and assurance that the containers were delivered to the appropriate address, matches items delivered with items ordered to ensure that the right items were delivered in the right quantities, and identifies items that require special handling considerations. Obvious damage is identified during this process.

A23312 Inspect

This activity involves the required steps taken in processing verified supplies before they are considered serviceable. This includes physical inspection of materiel based on established quality assurance (QA) indicators. Items of materiel meeting QA guidelines are processed as serviceable items. Items failing the guidelines are considered unserviceable and are rejected for stock or issue.

A23313 Determine Distribution

Determine Distribution is the process of ensuring that supplies are delivered to the right location (e.g., inventory replenishment or delivered directly to customer).

A23314 Accept

This is the final step in the receiving process. It is a formal acknowledgement by a customer or by Medical Logistics personnel that the vendor has delivered items that are acceptable to satisfy the need that generated the order.

A2332 Replenish

Replenish is the process of restocking supply inventory.

A23321 Stock Items

Stock Items is the process of determining location of supply items, breaking them into prescribed units of issue or measure, and storing them per storage guidelines.

A23322 Determine Replenishment Requirements

Determine Replenishment Requirements is the ongoing process of identifying replenishment requirements for supply items. This process includes performing physical count, assessing quality, calculating and adjusting stocking levels as required, and identifying the optimal replenishment requirements.

A23323 Issue

This activity is the process of picking available supply items from inventory and distributing them to specific locations. This process includes filling customer requirements, transferring items, redistributing serviceable excess, and handling turn-ins to a DRMO. This process may or may not generate sale.

A2333 Dispose

Dispose is the process of destroying or disposing of serviceable/unserviceable supply items and returning materiel to vendors or sources.

A2334 Maintain Inventory Balances

Maintain Inventory Balances is the process of monitoring and adjusting inventory levels to ensure that an adequate quantity is available to meet requirements.

A24 Acquire Materiel and Services

The primary elements in this activity are determining alternate outsource options, establishing outsource options, and executing outsource options. The acquisition of an outsource service is initiated by a customer requirement that has been reviewed and determined to be outside the capability of Medical Logistics. This could include submitting a request for contractual procurement to an outside contracting organization, submitting a requisition to the supply system, requesting services under a Memorandum of Understanding (MOU) with another military organization or Service, or awarding orders to vendors (when authorized) under existing delivery order contracts. An internal evaluation is maintained on the performance and execution of outsource services for future use in requesting additional service.

A241 Determine Outsource Option

Determine outsource option involves selecting the best method and resources for acquiring materiel, real property, or services from an outside organization or agency (e.g., MOU, Inter-Service Support Agreement (ISSA), Purchase Order or contract). Steps within this activity include identifying existing agreements, contracts, or excess assets that may satisfy the customer's request and ensuring compliance with existing policies and regulations. The primary output of this activity is either a selected acquisition outsource option or a rejected outsource request that is returned to the customer.

A242 Establish Outsource Option

This is the process of formalizing the selected outsource option. Upon receipt of acknowledgement of the ability to provide the requested support services, an outsource agreement in the form of an MOU or ISSA may be negotiated and signed to obtain services. This process also includes placing delivery orders against pre-negotiated outsource agreements (e.g., Blanket Purchase Agreement (BPA), Indefinite Delivery Order Contracts, Federal Supply Schedule (FSS) contracts, Emergency Service Agreements, or Maintenance Service Agreement).

A243 Execute Outsource Option

This activity includes providing contracting officer's technical representative (COTR) oversight of deliverables (e.g., health care services, supplies, equipment, or real property) and accepting deliverables upon completion. It includes the following: orders, modifications, follow-ups, administering contract (e.g., coordination and monitoring). Placing orders refers to all agencies for support (i.e., civil engineers, communications, materiel, or services). The status of due-ins is monitored during this process. This process may produce an outsource modification request.

A3 Manage Information

Logistics information is assembled and packaged in a usable format in response to an internal or external requirement. The primary activities are controlling access to information, and collecting, updating, analyzing, providing, and disposing of information. This activity excludes tasks performed in other activities that create information as an inherent part of that task. It may include purchasing information as well as gathering available information and providing it in a modified format for the customer. All information packages are provided in a format to enhance decision support.

A31 Control Access

Control Access accepts logistics information requests and verifies whether a request for information is from an authorized customer and does not violate security classifications or other restrictions to access. If the request is in violation of access rules, it is rejected. Validated requirements are accepted for appropriate processing.

A32 Collect/Update Information

Collect/Update Information gathers information from the different logistics activities. Any existing information is updated and maintained in a usable format. This involves collecting and verifying the accuracy of information from internal and external sources. Some information may have to be purchased with an outsource request. The information collected may be as simple as a request for catalog information or a customer inquiry for information about the status of due-outs or status of funds. It may be as complex as a request for implementing a new medical service such as a new Obstetrics-Gynecology (OB-GYN) service. This would involve collecting internal information from all areas of the logistics community, handling external requests for information from Civil Engineers and other activities, and purchasing information from a civilian vendor. As the information is received from the different organizations, it is collected as updated information. This information activity is essential to providing Medical Logistics support.

A33 Analyze Information

Analyze Information involves researching updated information to ensure an accurate and appropriate response to a customer's needs. Updated raw information is received and sorted, collated, compared, validated, and calculated. The raw information is transformed to a form usable for the intended purpose or desires of the customer. This transformation results in assimilated information that is often new information. When new information is generated from this analysis, it is returned for inclusion in the update process. Information that becomes outdated is marked for updating, deletion, disposal, or destruction.

A34 Provide Information

Provide Information is the process of linking the authorized request for information with the assimilated information and updated information, and preparing a response to a customer. Updated and assimilated information is packaged in a usable form to support the decision-making process or to provide customer support information.

A35 Dispose Information

Dispose Information involves eliminating outdated information in accordance with the Federal records retention guidance and the Defense Disposal Manual and Functional Information Management (FIM) principles.

3.9 Medical Logistics Activity Model ICOM Definitions

Accepted/Condition-Coded Equipment

See definitions for Accepted Equipment and Condition-Coded Equipment.

Input: A213, A2131, A2132
Output: A214, A2142, A2144

Accepted Equipment

All equipment entering a medical activity including that which has passed testing for serviceability, functional utility, reliability, and safety. This includes equipment that has not previously been furnished to an individual or organization and previously issued equipment re-entering the system. In the case of initial issue of equipment, contract completeness has been verified and a maintenance history record has been initiated.

Input: A213, A2131
Output: A212, A2142, A21424

Accepted Package

A customer requirements package (including CBA information) that has been reviewed with all support requirements and/or TPF information.

Input: A21124
Output: A21123

Accepted Supplies

Supplies that have passed inspection and are found to be acceptable.

Input: A2332, A22321
Output: A2331, A23314

Account Information

Information showing how resources have been committed and obligated to a specific task or project.

Input: A2223
Output: A2222, A22221, A22223

Acquisition Status

Information provided to identify when items have been requested. This includes information about contracts, delivery date, and any modifications made to contracts.

Input: A2122
Output: A2121

Additional Training Requirements

Supplementary information that indicates a need for additional training. This information may be gathered during maintenance service or repair of an equipment item.

Input: A21414

Adjusted Facility Systems and Programs

Ongoing systems or programs that have been changed to ensure they meet mission requirements.

Input: A22313
Output: A22312

Adjusted Resource Information

Identification of the resources required for a specific project or program that were not included in the original resource requirement.

Control: A2212, A22123, A22124
Output: A2213, A22131, A221312, A221313

Adjustment Directive

An order calling for alteration of one or more components of an operating facility system or program in order to improve performance.

Input: A22312
Output: A22311

Allocated Funds

Funds that have been received and assigned to a particular item or to a specific program or cost center.

Input: A13
Output: A12, A124

Alternatives Package

Assembled information identifying various methods to accomplish a specific task or project.

Input: A221312
Output: A221311

Analyzed Package

A customer requirements package that has received a Cost/Benefit Analysis.

Input: A21123
Output: A21122

Anticipated Sales

The total dollar value of the expected sales to all customers for the budget year.

Input: A124
Output: A122

Approval Policy

A specific type of law, directive, or policy used as a control in obtaining approval of equipment requirements. This policy identifies where approval for authorization and purchase of equipment items must be obtained.

Control: A2114

Approved Equipment Request

A requirement for equipment that may be satisfied by acquiring new or redistributing existing assets.

Input: A213, A214, A2131, A2132, A2133, A21321, A21322, A2141, A21411
Output: A211, A2111

Approved Requirement

Established needs that are verified as being in the best interests of sustaining the facility's mission.

Input: A2212, A22121, A22122, A22123
Output: A2211, A22113

Assembled/Installed Equipment

Equipment that has been made ready for testing.

Input: A21423
Output: A21422

Assigned Funds

Authorized funds distributed against validated requirements.

Input: A14, A141
Output: A13

Assimilated Information

Data or information that is extracted, analyzed, and formatted from updated information.

Input: A32, A34
Output: A33

Authorization

The authority for an organization or an individual to accept custody of materiel.

Control: A23314

Authorized Funding Level

The amount of funding received as a result of the budget process.

Input: A1, A13

Authorized Package

A customer requirements package that has been validated.

Output: A21121

Authorized Package Requiring CBA

A customer requirements package that has been validated and requires a Cost/Benefit Analysis.

Input: A21122
Output: A21121

Authorized Package Requiring Funding Determination

A customer requirements package that has been authorized and is pending funding determination.

Input: A21124
Output: A21121

Authorized Package Requiring Support Review

A customer requirements package that has been authorized and is pending identification of support requirements.

Input: A21123
Output: A22121

Authorized Request

A validated request from an authorized customer for information the customer may be permitted to obtain.

Control: A32, A34
Output: A31

Automated Receipt System

An automated process that matches received materiel against ordered items.

Mechanism: A2123

Automated Technical Library

On-line source for technical information related to goods and services. Available reference information may include: equipment technical literature, product data sheets, other manufacturer specifications, listings of contracted services, clinical lessons learned, and product comparisons.

Mechanism: A214

Available Excess

Excess materiel that is available within the organization or reported as available from other outside agencies or MTFs.

Control: A241

Available Information

Information that has been provided or that has been assimilated into an acceptable form for the customer.

Input: A34

Available Inventory

Supply items that are available to satisfy customer requirements.

Control: A232, A2322
Output: A233

Available Quantity

The quantity of an item in inventory that is available to satisfy a customer requirement.

Input: A2324
Output: A2322

Available Resource Data for Requirement

A list or lists of all resources (time, personnel, materiel, funds) available to accomplish a requirement.

Input: A22124
Output: A22123

Available Resources

A list or lists of all resources (time, personnel, materiel, funds) available to accomplish the Facility Master Plan.

Control: A2213, A22131, A221311
Output: A2212, A22123

Available Sources

Available, responsive, responsible suppliers of materiel, support services, or facilities.

Input: A2, A24, A242

Backorders

The status of an item that is unavailable for issue to a customer and has to be ordered from a source of a supply. A due-out is established for this item.

Control: A233, A2334
Output: A232

Best Alternative

The means of fulfilling a requirement that is most appropriate, economical, and/or efficient.

Input: A221313
Output: A221312

Budget Items

Items that have been submitted for inclusion in the budget process.

Input: A112

Output: A111

By-Products

Items that are taken to disposal or destroyed because they are excess, unserviceable, or expired. This includes, but is not limited to: facilities; information; equipment; supplies; and all types of waste including industrial, regulated medical, and general waste.

Output A2234, A2235, A2236, A22361, A22362, A22363, A35

CBA Standard Package

A state-of-the-art commercial off-the-shelf software package that is used by all MHSS medical treatment facilities to provide for cost/benefit analysis and/or life-cycle cost analysis.

Mechanism: A2111, A2144

Cleared Work Site

An area in the immediate vicinity of a facility modification that is ready for the installation of building components and materials.

Input: A22363, A22364

Output: A22362

Clinical Guidance

Medical and dental clinical judgement used in prioritizing and managing medical and dental resources to meet the established standards of care.

Control: A0, A2, A3, A32, A33

Command Directed Actions

Those items a higher command has directed that a medical treatment facility will include in its next budget submission.

Input: A111

Committed Funds

Funds that have been reserved for a specific acquisition.

Output: A2121

Completed Inspection Work Order

A completed work order for a technical inspection of an equipment item.

Input: A2141
Output: A2142, 21424

Completed Inventory List

A list of actual on-hand balances resulting from a physical inventory.

Input: A21323
Output: A21322

Completed Maintenance Work Order

Completed work order for a scheduled service on an equipment item.

Input: A2141
Output: A2143, A21431, A21432, A21433

Completed Repair Work Order

Completed work order for an unscheduled service on an equipment item.

Input: A2141
Output: A2144, A21441, A21442, A21443

Completed Training Work Order

Completed work order for training on an equipment item.

Input: A2141
Output: A2145

Completed Work Orders

Those work orders that have all required work finished and the date and time completed.

Input: A2141, A21412, A21413, 21414

Condition-Coded Equipment

Equipment no longer required in the mission of the health care facility, in excess of the authorized quantity for retention, or in an unserviceable condition. This equipment is classified as either serviceable, unserviceable, not functionally usable, unreliable, or unsafe.

Input: A2132, A21321
Output: A2144, A21442

Construction Zone

An area cleared of normal activities, in which modification of a facility is, or will be, taking place.

Input: A22362, A22364
Output: A22361

Contracts

Legally binding agreements between the U.S. Government and sources of supply for a specific service or item for a stated amount.

Control: A211, A214, A2112, A2141, A2143, A2144, A21411, A21413

Coordination Request

A request to arrange for resources to accomplish a requirement.

Input: A222, A2221, A22211
Output: A221, A2212, A2213, A22124, A22131, A22133, A221311, A221313

Customer & Funded Requirements

See definitions for Customer Requirements and Funded Requirements.

Input: A2, A21, A22, A23, A211, A212, A221, A222

Customer Location

Physical area in which the customer conducts normal day-to-day activities.

Input: A2312

Customer O&M Budget

The amount of medical supplies and equipment funds budgeted for by logistics O&M customers.

Input: A1, A12, A122

Customer Request

A facility request identified by the customer in support of the medical mission. A customer may be an organization, an agency, or an individual (either internal or external).

Input: A221, A2211, A22111

Customer Requirement for Maintenance Support & Funded Requirement

See definitions for Customer Requirement for Maintenance Support and Funded Requirement.

Input: A214, A2141, A21411

Customer Requirement for Maintenance Support

Customer requirement for support not directly related to the repair or maintenance of an equipment item (e.g., training request, pre-acquisition site survey).

See Customer Requirement for Maintenance Support & Funded Requirement.

Customer Requirements

Needs identified by the customer in support of the medical mission. A customer may be an organization, an agency, or an individual (internal or external).

Input: A0, A2, A23, A211, A2111, A2112, A231, A232, A2311, A2312, A2321, A2322

Customer Requirements Package

A completed materiel request package.

Input: A2112, A21121

Output: A2111

Customer Support Information

Information packaged in a usable form to meet customers' needs. It can be logistics, decision support, or strategic planning information. Examples of logistic information include cataloging and safety recall information; decision support information includes performance indicators, readiness posture, and budget information; strategic planning information includes workload and contingency planning information.

Output: A0, A3, A34

Mechanism: A1, A2

DBOF Budget Submission

The total package of DBOF requirements for the budget year, which includes the inventory requirements, sales program, WRM program, and operating programs.

Output: A12, A124

Debit Report

A report to verify funding allocations for services received for maintenance and repair activities.

Output: A22, A222, A2223

Deficiency

A problem adversely affecting the medical mission that requires Medical Logistics support.

Output: A21423

Delivered Equipment

Equipment received from vendors, assembly operations, supply depots, and other sources.

Input: A213

Output: A212, A2123

Delivered Equipment Awaiting Inspection

Equipment that has been through the receipt process (due-in) and is pending acceptance inspection.

Input: A214

Output: A212

Delivery & Frustrated Shipment Status

See definitions for Delivery Status and Frustrated Shipment Status.

Input: A2123

Output: A2122

Delivery Status

The current stage of delivery of a specific order line.

See Delivery & Frustrated Shipment Status.

Developed Projects and Programs

Requirements that have been analyzed and elaborated to an extent that allows their prioritization relative to all other requirements.

Input: A22132

Output: A22131, A221312, A221313

Direct Turnover Items

Supplies not carried in inventory that are ordered for a specific customer and issued directly to the customer.

Input: A23314
Output: A23313

Disposed Stock Items

Items that have been removed from inventory to be destroyed or returned to the vendor.

Control: A2334
Output: A2333

Disposition Instructions

Guidance provided to the holder of excess or unserviceable materiel for disposal or redistribution.

Input: A233
Output: A231, A2314

DMLSS

Defense Medical Logistics Standard Support System.

Mechanism: A0

Due-Outs

Materiel that is backordered for a customer as a result of insufficient operating quantities.

Control: A23313

Enhanced Rejected Package

A rejected budget package that has had additional information or justification added for reconsideration for inclusion in the budget program.

Input: A111

EPA Regulations

Environmental Protection Agency rules and regulations related to the management of designated materiel.

Control: A2333

Equipment

Materiel that is not consumed in use, retains its original identity during the period of use, and requires accountability. All non-expendable items needed to outfit/equip an individual or organization. (Joint Pub 1-02)

See Serviceable Excess List & Equipment.

Equipment Awaiting Inspection

Equipment that has been accounted for and requires maintenance inspection prior to issue to a custodian (e.g., donated property, property found on installation, transfers from other commands).

Input: A214, A2142, A21421
Output: A213, A2131

Equipment Deficiency

An equipment item that has failed a safety inspection, performance check, or maintenance service.

Input: A2144
Output: A2143, A21431, A21432, A21433

Equipment Disposition Policy

Current Regulations and Guidance governing the redistribution and/or disposal of equipment.

Control: A2133

Equipment for Repair/Inspection

Equipment that needs repair or inspection services performed.

Input: A21441

Equipment for Maintenance

On-hand equipment needing repair or service (e.g., calibration, preventive maintenance).

See Maintenance Supplies & Equipment for Maintenance.

Equipment Needing Maintenance

Equipment requiring scheduled or unscheduled service.

Input: A21433

Equipment Needing Performance Check

Equipment requiring scheduled or unscheduled calibration/verification.

Input: A21432

Equipment Outsource Request

An outsource request for equipment.

Input: A24

Output: A21

Equipment Receipts

Data from the receiving activity indicating equipment has been received.

Control: A24, A213, A2131

Output: A21, A212, A2123

Equipment Request/Requirements

See definitions for Facility Equipment Request, Equipment Supplies Requirement, and Equipment Outsource Request.

Output: A21, A211, A212, A213, A214

Equipment Supplies Requirement

Request for supplies and spare parts to fulfill an equipment requirement.

Input: A23

Output: A21

Equipment Verification Notification

Information regarding acceptance of an equipment receipt. This initiates payment or non-payment to a vendor.

See Equipment Verification Notification & Deficiency.

Equipment Verification Notification & Deficiency

See definitions for Equipment Verification Notification and Equipment Deficiency.

Input: A212, A2123, A2144

Output: A214, A2142, A21421, A21422, A21423

Established Agreement

Outsource agreements that are currently in force and available for use. This may include BPAs, indefinite delivery order contracts, ISSAs, MOUs, maintenance service agreements, prime vendor contracts, etc.

Control: A241
Output: A242

Evaluated Request

A compilation of all available information pertaining to a customer request or deficiency that has been correlated to all pertinent mission requirements, laws, regulations, or other guidance.

Input: A22113
Output: A22111

Evaluation Report

Information and data that are developed by evaluating the effectiveness of each medical facility operation at appropriate intervals and/or upon completion of the action. The information is used to improve the coordination of future similar activities.

Input: A222 A2221, A2222, A2223, A22211, A22221, A22223
Output: A224, A2242

Examination Information

The result of an inspection of a facility system or operation, focusing on any deficiencies and how they reduce the capabilities of the system or operation.

Input: A22111
Output: A22112

Examination Requirement

An order to inspect or examine an existing facility system or operation to determine the validity of a customer request.

Input: A22112
Output: A22111

Excess Items

That quantity of items that exceeds requirements and is made available for redistribution or disposal.

Control: A232, A2322
Output: A231, A2314

Existing Storage Facilities

A building, structure, or space available for storing supplies.

Control: A2312

Expense History

A history of the expenses of a cost center used to help project what future expenses will occur.

Input: A111

Facility

An entity that supports a medical mission, consisting of a building, suite, room, space, structure, or utility system (including associated land).

Input: A2233

Facility Deficiency

A facility problem adversely affecting the medical mission that requires Medical Logistics support.

Input: A221, A2211, A22111

Output: A222, A223, A224, A2221, A2222, A2231, A22311, A22312, A22313, A2241

Facility Equipment & Outsource Request

See definitions for Facility Equipment Request and Outsource Request.

Output: A212, A2121, A2142, A21421, A21422

Facility Equipment Request

A request for facilities services in conjunction with the installation or maintenance of equipment.

Input: A22, A221, A2212, A22121, A22122, A22123

Output: A211, A2112, A21123

Facility Equipment Resource Information

Information about the resources that would be needed to incorporate new equipment into a facility.

Input: A2213, A22131, A221311

Output: A2212, A22124

Facility Equipment Response

The result of an analysis of the feasibility of incorporating a new technology or piece of equipment into a facility.

Input: A21, A211, A212, A214, A2112, A2113, A2121, A2142, A21421
Output: A22, A221, A2213, A22131

Facility Master Plan

A prioritized list or plan of all authorized facility operations for a certain time period, usually 1 to 5 years. The information includes building/Real Property Installed Equipment (RPIE) inventory, anticipated projects and resources required, training and time constraints/deadlines for programs, contingency operations, and scheduling requirements.

Input: A222, A2221, A22211, A22212, A22213
Output: A221, A2213, A22133

Facility Outsource Request

An outsource request in support of facility operations.

Input: A24
Output: A22, A222, A2222, A22223

Facility Plan Information

Information from the Facility Master Plan to guide the prioritization process.

Control: A22132
Output: A22133

Facility Ready for Evaluation

A fully operating facility that requires an inspection, certification, or accreditation to become a Mission-Ready Facility.

Input: A224, A2241
Output: A223, A2231, A22313

Facility Task Status

The status of tasks related to facility operation.

Control: A24
Output: A22

FDA Extension Program

A program in which the Food and Drug Administration tests certain lots of potency-dated items to determine if the expiration date can be extended or not.

Control: A123

Fill Requirements

Needs or requirements to replenish managed items or satisfy customer needs.

Input: A233, A2332, A23323

FIM Principles

Set of principles developed and adopted by Functional Integration Management to provide guidance on systems integration, migration, design and development, implementation, and training.

Control: A3, A31, A32, A32, A34, A35

Financial Data

Information and financial transactions that interface with the DoD financial accounting system.

Input: A1, A3, A11, A14, A111, A141, A142, A143

Output: A2, A21, A22, A23, A24, A212, A213, A2121, A2123, A2131, A242, A243

Financial Status Reports

A summary of facility project, program, and O&M cost data from the finance office or resource manager, reflecting committed and obligated funds at a specific point in time.

Control: A2223

Fiscal Guidance

Monetary policy, direction, decision, or instruction that acts as an order. Guidance is disseminated through yearly appropriation acts, authorization acts, Program Budget Decisions (PBDs), and Defense Management Review Decisions (DMRDs). This includes the budget developed and submitted through the Planning, Programming, and Budgeting System (PPBS).

Control: A0, A1, A11

Follow-Up Request

An inquiry to the source for the delivery status of requested materiel and services.

Output: A243

Frustrated Equipment Information

Equipment information concerning receipt deficiency awaiting resolution by the contracting office.

Control: A2122

Output: A2123

Frustrated Shipment Status

The current state of an incomplete receipt of an order line.

See Delivery & Frustrated Shipment Status.

Fund Adjustment

An adjustment, either increase or decrease, made to a funding authorization by the fund's controlling authority.

Input: A143

Output: A142

Funded Requirements

A validated requirement against which funds from the applicable appropriation(s) and adequate resources have been authorized and committed based on current priorities.

Input: A2, A212, A2121, A222, A2221, A2222, A22211, A22221

Control: A11, A111, A112, A14, A141, A142, A143

Output: A1, A13

Funding Data

Information regarding funds that have been obligated because of the completion of work or uncommitted in order to fund new work.

Control: A2222, A22221, A22223

Output: A2223

Follow-Up Request

An inquiry to the source for the delivery status of requested materiel and services.

Output: A243

Frustrated Equipment Information

Equipment information concerning receipt deficiency awaiting resolution by the contracting office.

Control: A2122

Output: A2123

Frustrated Shipment Status

The current state of an incomplete receipt of an order line.

See Delivery & Frustrated Shipment Status.

Fund Adjustment

An adjustment, either increase or decrease, made to a funding authorization by the fund's controlling authority.

Input: A143

Output: A142

Funded Requirements

A validated requirement against which funds from the applicable appropriation(s) and adequate resources have been authorized and committed based on current priorities.

Input: A2, A212, A2121, A222, A2221, A2222, A22211, A22221

Control: A11, A111, A112, A14, A141, A142, A143

Output: A1, A13

Funding Data

Information regarding funds that have been obligated because of the completion of work or uncommitted in order to fund new work.

Control: A2222, A22221, A22223

Output: A2223

Funds Available

The dollar amount of allocated funds that have not been obligated and are available for use.

Input: A142
Output: A141

Historical Documents

The accumulation of reports, information, and pertinent facts that portray and describe a sequence of events for a specific time frame.

Control: A2242
Output: A2243

Historical Resources for Requirement

Information based on resource consumption/use for identical or similar work accomplished at the same, similar, or a nearby facility.

Input: A22124
Output: A22122

Hospital Personnel

Personnel who work in the medical facility.

Input: A223, A2232

Identified Deficiency

An equipment deficiency or malfunction that has been diagnosed and whose cause has been identified.

Input: A21443
Output: A21442

Incoming Supplies

Supply items that arrive at any Medical-Logistics-designated delivery point from a source of supply.

Input: A23, A233, A2331, A23311

Individual Equipment Service Schedule

Information acquired during an initial inspection of an equipment item and used to help formulate the service schedule.

Input: A21412

Inspection Information

Status and findings pertaining to facility programs or systems. This information may be provided as an evaluation report or as specific data acquired for a specific event.

Input: A2242
Output: A2241

Inspectors

Individuals who have been authorized to evaluate facility operations.

Mechanism: A224, A2241, A2242

Inventory Adjustment

A gain or loss posted to an inventory balance as a result of a reconciliation (on-hand assets versus recorded assets). Types of inventory adjustments are: statement of charges, cash collection, report of survey, gains by inventory.

Input: A21321
Output: A21323

Inventory Balances

The quantity of an item that is physically on-hand.

Input: A1, A12, A121, A123
Output: A2, A23, A233

Inventory Position

Identifies the dollar value of the inventory stratified as it should be and as it currently exists. The different strata of the inventory are identified separately (such as, Operating, WRM, Excess, backorders, safety level, order ship time, and economic order quantity).

Input: A124
Output: A121

Inventory Requirements Policy

Policy or directive relating to the maintenance of equipment inventory.

Control: A2132, A21321, A21322, A21323

Inventory Schedule

Chronological listing of required inventories.

Input: A21322
Output: A21321

Issue List

A list of items to be issued to the customer as a result of processing customer requirements.

Input: A233
Output: A232, A2324

Issued Equipment

Mission-ready equipment that has been assigned to a cost center.

Input: A2132
Output: A2131

Issued/Re-Issued Equipment

See definitions for **Issued Equipment** and **Re-Issued Equipment**.

Input: A2132, A21321

Issued Supplies

Items of supply that have been physically turned over to the customer.

Input: A23321
Output: A23323

Issues

Items provided to a customer to satisfy an identified requirement. An issue may or may not generate a sale.

Input: A23322, A23323
Control: A2334
Output: A2332, A23321, A23323

Item Characteristic

The physical properties of an item that can be used as indicators of suitability for its intended use, and that determine storage and handling requirements (e.g., shelf life, weight, and volatility).

Control: A2312, A2331, A2333, A23311, A23312
Output: A2311

Laws, Directives, Policies

Written or verbal communication in which a specific action is ordered that governs an entity's conduct or procedures. This includes, but is not limited to, congressional mandates, Service regulations, manuals, operating procedures, codes and standards, accreditation requirements, Federal regulations, practice standards, notices, newsletters, and command and other guidance.

Control: A0, A121, A122, A123, A2211, A22111, A22112, A22113, A2241, A2243

Local Purchase Surcharge

The percentage of local purchase sales charged to customers by the DBOF to recover operating losses.

Control: A142

Logistics Information

Any data that result from performing Medical Logistics functions. Some examples of these data are budget and programming information, planning papers, management and performance reports, research information, accreditation documents, and equipment repair history. This information is often used to produce customer support information.

Control: A2

Output: A1, A14, A143

Logistics Information Request

A request for data pertaining to logistics, such as budgeting, programming, planning papers, management reports, performance reports, research information, accreditation documents, and equipment or facility repair history.

Input: A3, A31

Logistics Resources

All human, financial, and physical resources necessary to accomplish the Medical Logistics Mission.

Mechanism: A0

Maintenance Equipment Request

A request for equipment used by maintenance personnel to sustain equipment in a mission-ready status.

Input: A211, A2112, A21121

Output: A214

Maintenance Supplies

Parts, consumables, and support equipment used in the maintenance of equipment.

See Maintenance Supplies/Equipment Outsource Request.

Maintenance Supplies & Equipment for Maintenance

See definitions for Maintenance Supplies and Equipment for Maintenance.

Input: A2143, A21431, A21432, A21433

Maintenance Supplies/Equipment Outsource Request

See definitions for Maintenance Supplies and Equipment Outsource Request.

Output: A214

Maintenance Supplies Request

A request for the delivery of parts, consumables, and support equipment used in the maintenance of equipment.

Output: A2143, A21433

Materiel

Consumable and non-consumable items that are attributable to an organization, to include items in transit that become property when received and processed.

Input: A21, A212, A214, A22362, A22363

Materiel & Facilities

See definitions for Materiel and Facility.

Input: A0, A2, A21, A22, A23, A223, A2233, A2234, A2235, A2236, A22361, A22362, A22363

Materiel & Serviceable Excess

See definitions for Materiel and Serviceable Excess.

Input: A212, A2123

Output: A213

Medical Logistics Information

Data that have been provided to produce customer support information. Some of the data may be budget and programming information, planning papers, management and performance reports, research information, accreditation documents, or equipment repair history information.

Input: A3
Output: A2

Medical Market/Technology

The state of the medical industry's capabilities. This includes distribution channels, administrative practices, manufacturing capability, and de facto standards of care (i.e., legal implications).

Control: A0, A22121

Mission-Ready Equipment

Equipment that is capable of fulfilling its intended mission and is reliable and safe.

Control: A22, A221, A222, A223, A2212, A2213, A22123, A22131, A2212, A221311, A2222, A22221, A2233, A2234, A2235, A2236, A22361, A22362, A22363 A22364
Output: A21, A213, A214, A2132, A2133, A21321, A2143, A21431, A21432, A21433

Mission-Ready Facility

A medical facility that is fully able to conduct all assigned tasks and operations in support of its medical mission.

Output: A0, A2, A22, A223, A2241

Mission-Ready Maintenance Equipment

Equipment used by maintenance personnel to sustain equipment in a mission-ready status.

Output: A213
Mechanism: A214

Mission-Ready Materiel

Supplies and equipment available to support the MHSS mission.

Output: A0, A2

Mission-Ready Supplies

Supplies available to support the patient care mission.

Input: A21, A22
Output: A23, A233, A2331, A2332

MTF Restocking Requirements

Quantity-level requirements for a specific MTF related to its stock items that are based on item-demand history, WRM requirements, seasonal adjustments, and other forecasting tools.

Output: A233, A2332, A23322

Need for Additional Storage

A determination that the existing square footage available for storage of materiel is inadequate to satisfy requirements.

Output: A2312

Need to Modify Stock Levels

An identified requirement to increase or decrease the established stock levels based on consumption trends, forecasted needs, and customer requirements.

Control: A2311
Output: A2314

Non-Stocked Items

Items with a low usage rate that do not qualify for an inventory level greater than zero and are purchased on an as-required basis.

Output: A2311

Not Needed Serviceable Excess Equipment and Scrap

Equipment no longer necessary to the mission.

Output: A2133

O&M Funds

Operations and Maintenance funds appropriated by Congress annually to satisfy normal day-to-day needs. Excludes investment equipment; military construction projects; military pay; and Research, Development, Test, and Evaluation (RDT&E).

Control: A232, A2321

On-Hand Balance

All quantities physically available (including suspended items, items ready for issue, and WRM) based on actual count or stock record balances.

Input: A231, A2314
Control: A2332, A23322
Output: A233, A2334

On-Hand Equipment Information

Information regarding equipment assets controlled within the system, including requisitioning, receipt, storage, control, shipment, disposition, identification, maintenance, and accounting.

Input: A214, A2131, A2141, A21411, A21412, A21413
Output: A213, A2132, A21323

Open Work Order

An active work order.

Input: A2142, A2143, A2144, A2145, A21421, A21431, A21432, A21433, A21441
Output: A2141, A21413

Operating Facility Systems and Programs

All of the physical systems and programs within a facility that are in force and operating.

Input: A2231, A22312, A22313
Output: A2233, A2234, A2235, A2236, A22364

Operational Data

Information regarding work being performed in carrying out facility operations.

Output: A2233, A2234, A2235, A2236, A22364

Operational Guidance

Information governing training and facility operations to ensure a facility is fully operational.

Control: A2232, A2233, A2234, A2235, A2236, A22312, A22313, A22361, A22362, A22363, A22364
Output: A2231, A22311

Order History

Information about previous orders for an item. This includes vendor performance, pricing data, delivery schedules, and order quantities.

Control: A241

Output: A243

Order Strategy

A plan that identifies a method of maintaining established stock levels in support of the stock plan.

Output: A2313

Ordering Information

Information regarding the ordering and status in the supply system of parts, materiel, or other resources.

Control: A22222

Output: A22223

Orders

Acquisition instruments used in obtaining necessary materiel, services, or facilities.

Control: A2123

Output: A243

Outbound Materiel

Supply items that have been processed for shipment to another organization.

Output: A2333

Outdated Information

Information that is no longer needed or valid.

Input: A35

Output: A33

Outside Budget Request

The final budget program that has been submitted to a higher echelon for funding and is awaiting assignment of funds.

Control: A12, A13, A121, A122, A124

Output: A1, A11, A113

Outsource Agreement

A resulting contract, support memorandum, or agreement between the medical organization and other Government or commercial sources to obtain supplies, services, facilities, information, or equipment.

Control: A21, A22, A23, A212, A213, A2121, A2132, A21322, A243
Output: A24, A2421

Outsource Deliverable

Any materiel, facilities, or support services that are provided by an outside organization.

Input: A221, A222, A223, A2213, A22131, A221313, A2222, A22221

Outsource Deliverable Status

Information regarding when an outsource request will be filled.

Control: A22223

Outsource Modification

An amendment or modification to an agreement with other Government agencies or a commercial vendor for supplies, services, facilities, information, or equipment.

Input: A242
Output: A243

Outsource Request

A request for the delivery of supplies, services, facilities, information, or equipment from an outside organization.

Input: A24, A241, A242
Output: A213, A2132, A21321

Outsource Request for Service

A request for service provided by an outside organization.

Output: A21413

Performance-Checked Equipment

Equipment that has passed scheduled or unscheduled calibration/verification.

Input: A21433
Output: A21432

Performance Data

A combination of operational and training data.

Control: A2231, A22311

Plan Adjustment Information

Information and data that are developed by evaluating the effectiveness of all medical facility operations and then used to improve the Facility Master Plan.

Input: A221, A2213, A22131, A22132, A22133, A221311, A221312, A221313

Output: A224

Planned Maintenance Supplies

Supplies necessary for performing scheduled equipment maintenance.

Output: A21411

Planned Maintenance Supplies & Outsource Request

See definitions for **Planned Maintenance Supplies** and **Outsource Request**.

Output: A2141, A21411, A21413

Plans and Missions

The medical component of DoD contingency plans to include force structure, outfitting, mobility, and transition plans. In peacetime, these plans state the optimal use of medical resources and directed missions to meet beneficiary needs.

Control: A0, A121, A122, A2211, A22111

Preliminary Work Schedule

A draft work schedule.

Input: A2222, A22221, A22222, A22223

Output: A2221, A22213

Prioritized Requirements Package

Validated Customer requirement packages that have been ranked.

Input: A2114

Output: A2113

Procurement Constraints

Policy directives or budgetary changes that affect procurement functions (e.g., threshold of warrants, debarment, credit hold).

Control: A242

Procurement Status

Information provided to identify when items have been contracted, delivery dates, and any modifications made to contracts.

Input: A211, A2111

Output: A212, A2122

Project Priority Information

Information regarding how projects and programs are prioritized.

Control: A22131, A221311

Output: A22132

Proposed Work Schedule

A preliminary schedule to be reviewed for compliance with the Facility Master Plan.

Input: A22213

Output: A22211

QA Guidelines

Documented guidance on methods of ensuring the suitability of an item for its intended use.

Control: A23312

QC Information

Information derived from the review of the preliminary work schedule, schedule resolution, and the Facility Master Plan, used to improve the efficiency of the work schedule.

Control: A22211

Output: A22213

Receipt Confirmation

The process of validating and affirming the receipt of materiel.

Input: A2122

Output: A2123

Receipt for Work

A document given to facility personnel signifying that work has been completed.

Input: A2231, A22313
Output: A2234, A2235, A2236, A22364

Receipts/Task Status

Delivery information concerning requested materiel or services. This includes the actual receipt, cancellation, or modification of the materiel or services.

Control: A24, A243

Record Information

The compilation of data that represents an event, and measures and documents its outcome.

Input: A2243
Output: A2242

Re-Issued Equipment

In-use equipment that has been identified for transfer to another user.

Input: A2132
Output: A2133

Rejected/Cancelled Request

A disapproved or cancelled facility request.

Output: A2211

Rejected/Cancelled Requirements

Reviewed customer requirements for equipment that have been rejected or cancelled based on an invalid need or an improperly documented request.

Control: A212
Output: A211, A2111, A2112, A2114, A21121, A21122, A21123, A21124, A2121, A221, A22113

Rejected Outsource Request

A request for outsource services that could not be satisfied and that is being returned to the requestor.

Output: A241, A242

Rejected Package

A request for funding that has been returned to the requestor. Some reasons for rejection include: missing justification, missing brochure, etc.

Output: A111, A112, A113

Repair Supplies & Equipment for Repair/Inspection

See definitions for Repair Supplies and Equipment for Repair/Inspection.

Input: A2144, A21441, A21443

Repair Supplies

Supply items used during the process of repairing equipment.

Input: A21443

Repair Supplies Request

A request for a supply item to be used during the process of repairing equipment.

Output: A2144, A21442, A21443

Repaired Equipment

Equipment that has been restored to operational condition and requires a safety inspection, performance check, or maintenance service.

Input: A2143

Output: A2144, A21443

Replenishment Items

Items of supply that have been received and accepted for restocking.

Input: A23322

Output: A23323

Replenishment Schedule

Timetable for replenishing stock in all areas where supplies are stored and maintained pending issue to customers.

Control: A23322

Report Requirements

Identification of financial accounts that require some type of reporting. This reporting can be in the form of Trial Balances, management reports, ad hoc reports, reports on customers' funds, billing to customers or billing from vendors, etc.

Output: A14, A143

Reprioritized Requirements Request

A request for items not funded to be reprioritized with new requirements.

Input: A2113

Output: A2114

Request for Outsource

An indication of resources that are not ready or available within an organization (but that are needed to fulfill a requirement).

Input: A22223

Output: A22222

Request for Support

A request to an outside organization to provide required supplies, equipment, services, information, or facilities that are not internally available. Examples include requests to: post/base contracting, engineering support, another Federal agency, vendors, etc. Types of support being requested include: procurement of supplies, equipment, services, and construction; inter-Service support; contract monitoring; follow-up requests, etc.

Output: A242

Requested Supplies

Validated request for materiel.

Control: A2322, A2324

Output: A2321

Required Quantity

The quantity of an item needed to satisfy a customer requirement.

Input: A2322

Requirement for Revalidation

Established needs that have been approved, justified, and prioritized but were not funded. These requirements must be prioritized and revalidated against the current unfunded requirements.

Input: A2112, A21121, A2213, A22132

Requirements Definition Policy

A specific type of law, directive, or policy used as a control in the Identification and Review of Equipment Requirements. These requirements are directed by the Medical and Line Logistics functions of the Component and or Major Commands.

Control: A2111, A2112, A2113, A21121, A21122, A21123, A21124

Requirements Priority List

A list of programs and projects prioritized to become part of the Facility Master Plan.

Input: A22133

Output: A22132

Resource Conflict Data

Indication of assets or materiel that are not or will not be available as required on the Work Schedule.

Control: A2221, A22212

Output: A2222, A22222

Resource Deficiency

The lack of adequate resources of any type (except money) to allow accomplishment of an activity.

Output: A2222, A22222

Resource Information

Analytical data and information about resources allocated, developed during coordination activities and used to improve the facility operation planning effort, including the Facility Master Plan.

Control: A221, A2212, A2213, A22122, A22123, A22131, A22132, A221311, A221312, A221313

Output: A222, A2222, A22221, A22222

Resource Request

A request for additional resources to complete an in-progress requirement.

Input: A222, A2222, A22221
Output: A223, A2235

Resource Requirement

An estimate of the minimum resources necessary to accomplish an approved requirement.

Input: A2213, A22131, A22132, A221311
Output: A2212, A22124

Response to Request

Information regarding the actions taken by an outside organization to satisfy a requirement for support. This information may include: contract data (purchase order #, delivery dates, costs, vendor identification, etc.), performing agency, estimated delivery date, and status of request. The response may be in the form of a bid that provides quotes and proposals from vendors who have been solicited to provide goods and services.

Input: A242, A243

Return Terms

Conditions identified by the supplier under which supply items may be returned.

Control: A2333

Reviewed Requirements Package

An equipment or facilities requirement that has been reviewed, evaluated, and forwarded for prioritization and funding consideration.

Input: A2113, A2114
Output: A2112, A21124

Risk-Level Guidance

Criteria based upon function, safety, maintenance requirements, and local historical data used to categorize the level of risk associated with medical equipment. Categories of risk determine the frequency of scheduled inspections. Devices with extensive maintenance requirements and potential high physical risk that would cause patient death upon failure are scheduled for inspection most frequently and are performed first when due. All devices classified as having extensive maintenance requirements are inspected next, then average or minimal maintenance requirements are scheduled.

Control: A214, A2141, A2142, A21411, A21412, A21424

Safety-Inspected Equipment

Equipment that has passed safety inspection.

Input: A21432

Output: A21431

Schedule Resolution Information

Information consisting of one or more proposals for reallocating required work to the work schedule.

Input: A22211, A22213

Output: A22212

Scheduling Conflicts

A mismatch between work requirements and time allocated on the schedule for their fulfillment.

Input: A22212

Output: A22211

Scheduling Deficiency

A mismatch between time allocated to a requirement and time available.

Output: A22212, A22213

Selected Outsource Option

Selected source and/or method in which materiel, services, and/or facilities are to be acquired.

Input: A242, A243

Output: A241

Selected Vendor

The vendor chosen to fill a procurement requirement.

Control: A2313

Service Plan

An organization's strategy for accomplishing maintenance services.

See Service Plan/Schedule.

Service Plan Requirement

Requirements that have been reviewed and are used in developing plans for maintaining equipment.

Input: A21412

Output: A21411

Service Plan/Schedule

See definitions for Service Plan and Service Schedule.

Control: A2142, A2143, A2144, A2145, A21413, A21414, A21421, A21422, A21423, A21424, A21431, A21432, A21433, A21441, A21442, A21443

Output: A2141, A21412

Service Schedule

An organization's timetable for accomplishing maintenance services.

See Service Plan/Schedule.

Service/Task Status

The operational status and/or degree of completion of a work order.

Control: A2, A24

Output: A21, A22, A23

Serviceable Excess

Operationally serviceable equipment or supplies that are no longer required by the user to complete the mission, exceed the quantity required, or are no longer authorized for retention.

Input: A23313

Output: A23312

Serviceable Excess List

The list of serviceable equipment that is excess to the mission of a given organization and is available for redistribution.

Input: A211, A2112, A21121
Output: A213

Serviceable Excess List & Equipment

See definitions for Serviceable Excess List and Equipment.

Output: A213, A2133

Serviceable Items

Supply items considered ready for issue or use.

Input: A23313
Output: A23312

Shipping Documents

Commercial or Government Bills of Lading that are received with incoming supplies.

Control: A23311

Shortages

Nonavailability of quantity of supply items that is identified during filling customer requests.

Control: A2322
Output: A2322

Shortfall

The difference between the amount of funds requested and the amount received, which may require submission of a new budget request.

Control: A11
Output: A13

Source Notification

Oral or written communication from Medical Logistics to supplier(s) related to the return of items.

Output: A2333

Special Inventory Request

A request for an unscheduled physical inventory.

Input: A21322

Standard Resources for Requirement

Information relating industry-wide standards or customary resource usage facts to a requirement.

Input: A22124

Output: A22121

Status Reports

Reports on the availability, level of utilization, and effectiveness of all resources in use, as well as information on the degree of completion of facility operations.

Control: A222, A2222, A22221

Output: A223, A2231, A22311

Stock Fund

A revolving account used for purchasing materiel for resale to customers.

Control: A23, A231, A2313

Stock Levels

A determination as to the quantity of each line item of supply that will be physically carried and managed in inventory. This determination is based on factors such as forecasted requirements, usage history, order and ship time, etc.

Input: A2313

Control: A233, A2334

Output: A2311

Stock Locations

The physical areas where supplies are stored and maintained pending issue to customers.

Control: A2313, A23321, A23323

Output: A2312

Stock Plan

A determination as to which items will be carried in inventory with an established level of at least one, for issue to customers.

Control: A2314, A232, A2321, A2323
Output: A231, A2311, A2312, A2313

Stocked Items

Items that are physically carried and managed in inventory.

Control: A2312, 2323
Output: A2311

Storage Capacity

The physical area available for storing supplies.

Control: A2311
Output: A2312, A2313

Substitute Items

Items that the customer agrees may be substituted for other items due to similar product characteristics and application.

Control: A2322, A2324
Output: A2323

Supplies & Equipment Awaiting Inspection

See definitions for Supplies and Equipment Awaiting Inspection.

Input: A214, 2142, 2143, 2144

Supplies

Materiel that is expendable or consumable.

Output: A23313

Supplies Outsource Request

An outsource request for supplies.

Input: A24
Output: A23, A232, A233, A2323

Supplies Receipts

Documents indicating that incoming items of supply have been delivered, inspected, verified, and accepted.

Control: A2334
Output: A23, A233, A2331, A23311

Supply Orders

Medical Logistics' requests to replenish stocked items.

Control: A23, A233, A2331, A23311

Support Evaluation

Results of reviewing the support requirements of analyzed requirements packages that require additional cost/benefit analysis. A Support Evaluation includes the feasibility of providing maintenance, facilities, personnel, and supply support.

Input: A21122
Output: A21123

Support Services

All services received from an outside source that support the mission of the MHSS (e.g., outsourced physicians and nurses, transportation, laboratory services).

Output: A0, A2, A24

Suspension Notices

Formal notification that an item must be suspended from issue and use. Disposition instructions may be provided with the notice or follow at a later date.

Control: A23313

Suspensions

Items suspected of or proven to be defective and declared not issuable pending further testing, evaluation, or disposition action.

Control: A2321

Tested Equipment

Equipment that has received an operational test.

Input: A21424
Output: A21423

TPF Information

Those resources associated with an equipment requirement that must be made available concurrently for equipment to be placed in useful service. This includes, but is not limited to: qualified staff, mission-ready facilities, training, spare parts, operating supplies, support equipment, and firm's to acquire supporting services (e.g., maintenance contracts).

Control: A11, A13, A111, A112, A113

Trained Hospital Personnel

Hospital personnel who have attended educational sessions designed to enhance awareness of their role in existing facility programs (e.g., fire, safety, waste management, resource protection).

Input: A224, A2241
Output: A223, A2232

Trained Users

Equipment operators who have received additional training on an equipment item.

Output: A2145

Training Data

Information regarding work being performed in training hospital personnel.

Input: A2231
Output: A2232

Training Requirements

The anticipated training requirements (operator and maintenance personnel) based on projected and on-hand equipment information.

Input: A21412
Control: A2145
Output: A2141, A21414

Turn-In

Materiel relinquished by a cost center when a mission requirement no longer exists.

Input: A2133
Output: A2132, A21321

Unfunded Requirements

Those items that have been justified and verified as required but for which funds have not been provided.

Output: A13

Unserviceable Supplies

Supplies not in acceptable condition to satisfy their intended use.

Input: A2333

Output: A2331, A2332, A23311, A23312, A23323

Updated Information

Data or information that has been made current.

Input: A33, A34

Output: A32

Upgraded Facility

A facility that has received a modification and is awaiting inspection of the completed work.

Input: A22364

Output: A22363

Usage History

The demand history for supply items.

Control: A231, A2311, A2314

Output: A233, A2334

Users Requiring Training

Equipment operators requiring additional training on an equipment item.

Input: A2145

Validated Deficiency

An equipment deficiency or malfunction that has been independently observed by a biomedical equipment repair person

Input: A21442

Output: A21441

Validated Packages

Packages that have been submitted and justified for inclusion in the budget process.

Input: A113
Output: A112

Validated Requirement for Equipment Redistribution

A customer requirement for equipment that has been validated and is available for redistribution from the Excess Equipment List.

Input: A212, A2121
Output: A211, A2113, A2114

Validated Requirements

Established needs that have been approved, justified, and prioritized but require funding in order to be accomplished.

Input: A1, A11, A111
Output: A2, A21, A22, A211, A222, A2222, A22223

Verified Equipment

Delivered equipment that meets contract specifications.

Input: A21422
Output: A21421

Verified Invoice

A document that confirms complete delivery of an order line.

Output: A2123

Verified Receipt for Work

A document verified by facility personnel signifying that work has been completed.

Input: A222, A2223
Output: A223, A2231, A22313

Verified Supplies

Supplies that have been received, inspected, and validated against the ordering document.

Input: A23312
Output: A23311

War & Ops Plans

A bundling of War Plans, which are directives identifying the mission of a particular organization, and Operations Plans, which are plans of operation to achieve an assigned mission.

Control: A123

Warehouse Denial

An approved stock issue for which there is an insufficient quantity on hand to satisfy the requirement.

Output: A23323

Work Schedule

A calendar or other document showing facility-operations-related work to be done and indicating the specific time period during which it is to be accomplished.

Control: A223, A224, A2241

Output: A222, A2222, A22221

WRM Shortages

The dollar value of the difference between WRM authorized and the on hand and due in for each program.

Input: A124

Output: A123

Section 4 Data Models

4.1 Introduction to Data Models

The IDEF1X data modeling technique used in cIM is an approach to data definition and analysis that can be used to discover, understand, and document an organization's business rule structure. A business rule has been defined as "an explicit statement stipulating a condition that must exist in a business information environment for information extracted from that environment to be consistent with business policy."¹

Within the cIM/IDEF1X framework, a data model is a representation of the data structures and business rules needed to support a particular business area. (The term "information model" is also frequently used to refer to the same concept.) Within a defined scope or business segment, a data model documents real or abstract entities, their characteristics or attribute, and their relationships with one another. Entities, in a data model, are those classes of people, places, things, concepts, and events about which the business collects and records data. An entity is named using a noun or noun phrase and is illustrated by a box with the entity name outside and across the top of the box, as shown in Figure 4-1.

The properties or characteristics that identify or describe entities are called attributes. An attribute is a commonly recognized descriptor of all instances of an entity and has a specific value for each instance. The attribute or set of attributes that uniquely identifies an entity instance is termed the primary key, and the remaining attributes are referred to as data attributes. Primary keys are placed above the horizontal line within the entity box while data attributes are placed below the line, as shown in Figure 4-1.

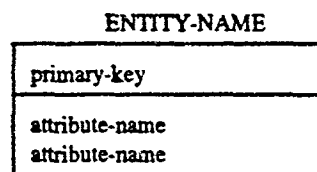


Figure 4-1. Sample Entity Format

Relationships between entities in a data model are shown as lines connecting the entity boxes. Each line is named using a verb or verb phrase to describe the relationship. The cardinality of the relationship, which is an expression of the number of instances of one entity that can logically be related to instances of the other entity, is represented by a dot at one or both ends of the relationship line, as shown in Figure 4-2.

¹ Appleton, D.S. "Second Generation Applications," *Database Programming and Design*. February 1988. pp. 48-54.

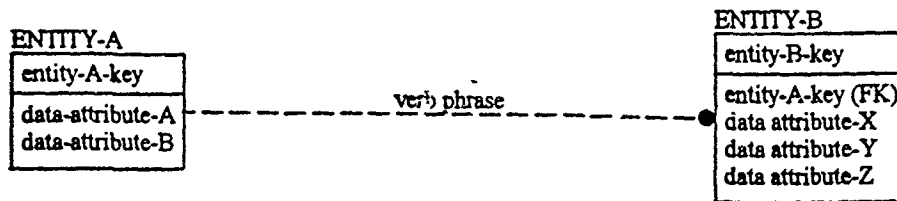


Figure 4-2. Sample Relationship

Depending on their level of detail, data models can serve to establish a common understanding of the business rules, facilitate consistent communication of the business rules among components of the organization, and improve the quality of database design and other automation services. IDEF1X data models can exist at three levels of detail:

- Entity Relationship Diagram (ERD)
- Key Based Model
- Fully Attributed Model.

Entity Relationship Diagram

The most generalized level is the entity relationship diagram, which focuses on entities and their inter-relationships. Since ERDs characteristically represent a particular subject area across a broad scope and in limited depth, they are used in the planning stages to aid in defining and validating data requirements. They are useful in defining initial business statements that represent constraints in the environment but do not provide a level of detail sufficient to allow precise statements about how an organization operates.

Key Based Model

A further refined entity relationship diagram that adds a unique identifier to each entity is referred to as a key based model. The key based model provides a more precise representation of the data than the ERD for a smaller scope of the subject area and in greater depth. These models are typically deliverables of a planning project in which enough data are analyzed to begin to plan implementation projects. They are used to define the scope of an implementation project and to verify that data assets can be successfully integrated and reused.

Fully Attributed Model

The fully attributed data model contains all of the key and non-key attributes characterizing the entities within a subject area scope. It provides a stable, non-redundant, integrated view of the area's data requirements. For this reason, the influence of the fully attributed data model, in conjunction with the corresponding activity models, extends from the requirements definition phase of an information system project through design. Databases designed from a well-built data model tend to be flexible and have lengthy life cycles because they are based on stable structures which promote data integrity and provide access to critical operational information.

4.2 Medical Logistics Data Model

The Medical Logistics AS-IS Data Modeling and Activity Based Costing Workshop produced a fully attributed data model reflecting a significant subset of the current business data requirements. This AS-IS data model became the primary input to the data modeling portion of the TO-BE Activity and Data Modeling Workshop. Through the use of several analytical techniques, the workshop participants refined and extended this model into a fully attributed TO-BE data model reflecting the data structures and business rules that they believed would support a more consistent, efficient, and flexible way of doing business in the future.

4.2.1 BPI Analysis

The primary driver for the evolution of the AS-IS data model to the TO-BE view was the analysis of the Business Process Improvements identified by the workshop group (see Section 5 for a detailed discussion). Each BPI was evaluated to determine if it had any data implications that were not covered sufficiently by the data model. As a result of this analysis, many new entities and attributes were created, and new associations of existing structures were built to support relationships called for by the BPIs.

4.2.2 Issues from AS-IS Workshop

During the AS-IS Data Modeling Workshop, a number of "TO-BE" issues were identified and documented. When these issues were analyzed during the TO-BE workshop, some were found to be already supported by the data model, but others prompted discussions that led to significant enhancements.

4.2.3 Ad Hoc Issues

As is often the case in data modeling, many highly productive sessions in the workshop arose from questions intended to clarify a particular aspect of the model. Perhaps the most powerful characteristic of a model is its ability to communicate information to the reader in a structured manner. When this information appears to be incorrect, inconsistent, or incomplete, or is simply unclear, an obvious opportunity exists to improve the model. While the workshop facilitator is expected to raise questions of this nature, in many instances during the TO-BE workshop the question came from one of the participants. When this happens, it is clear that the subject-matter experts have begun to blend their knowledge with the modeling methodology to create a powerful synthesis. A significant portion of the TO-BE data model evolved in this manner.

4.2.4 Documentation of Business Rules

The majority of data-related business rules can be captured succinctly in IDEF1X diagrams. Where possible, this has been done with the Medical Logistics TO-BE data model. In those cases where the complexity of a rule exceeded the diagram's capabilities, the rule was documented in a text format

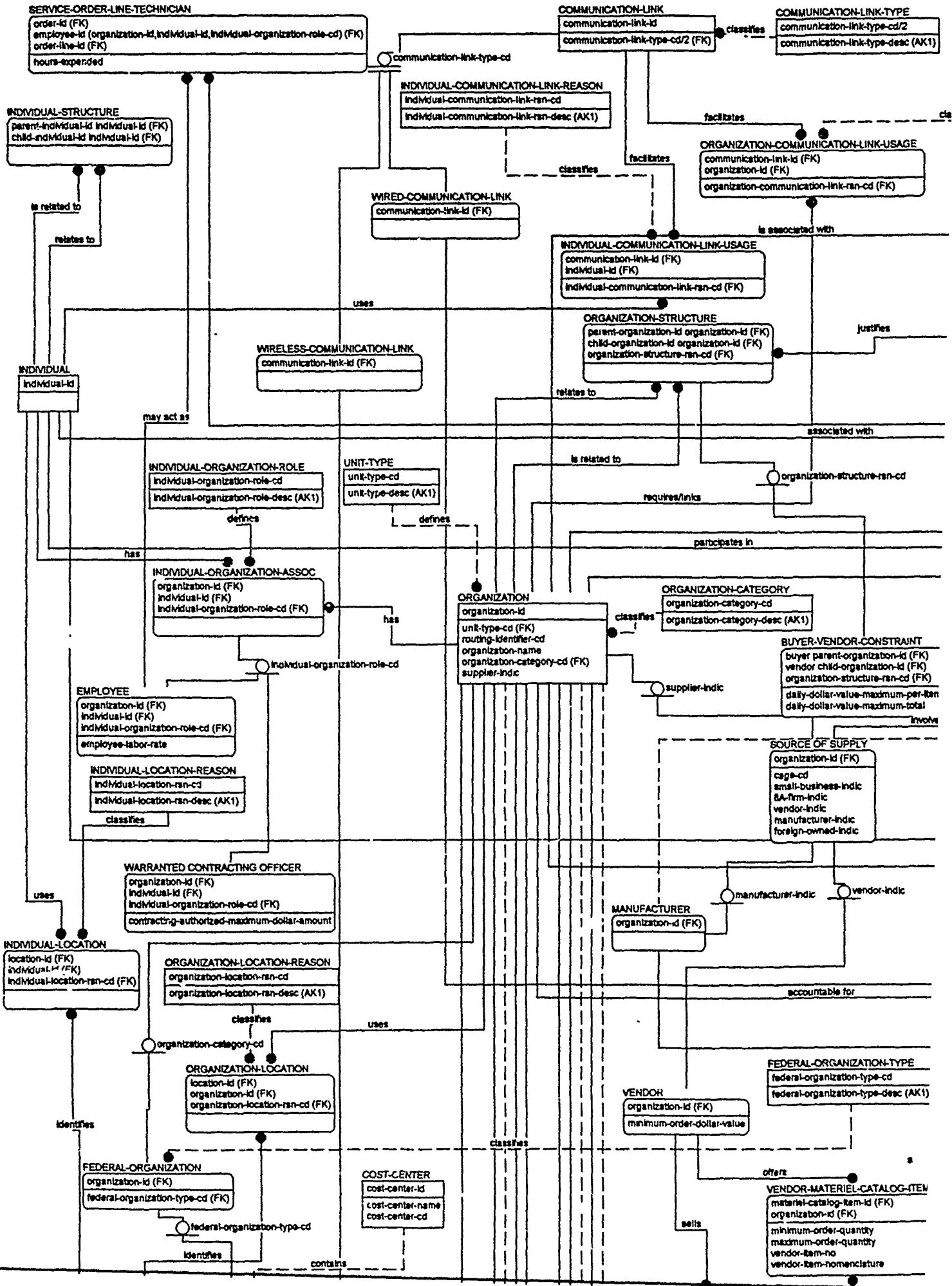
(see Section 4.6). Just as with the model diagram, the written business rules serve two purposes:

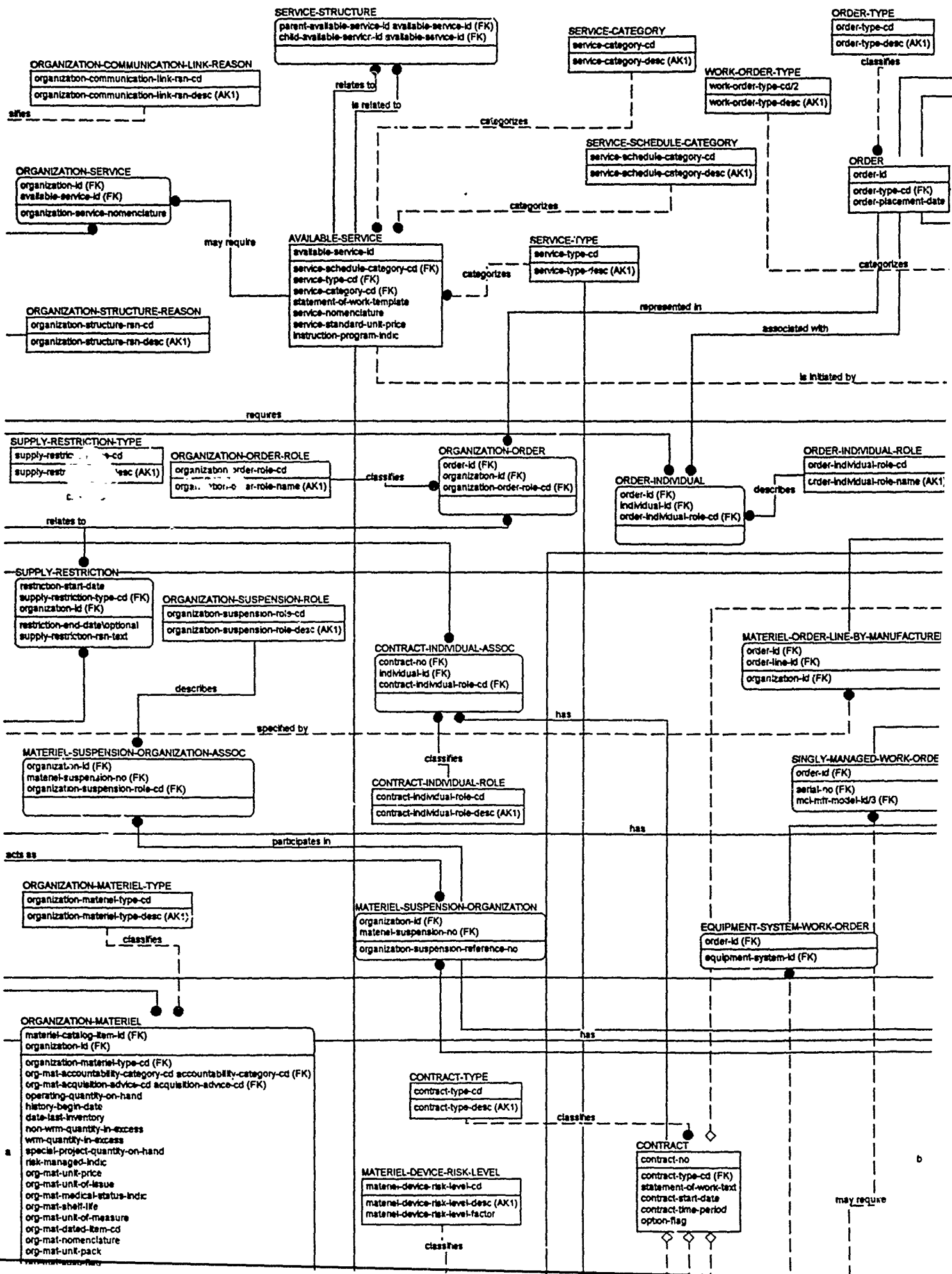
- a. They make an assertion about the business that can then be evaluated and either corrected, expanded, or confirmed.
- b. Once confirmed, they serve as an invaluable guide to the establishment of standard operating procedures and/or the design of automated systems.

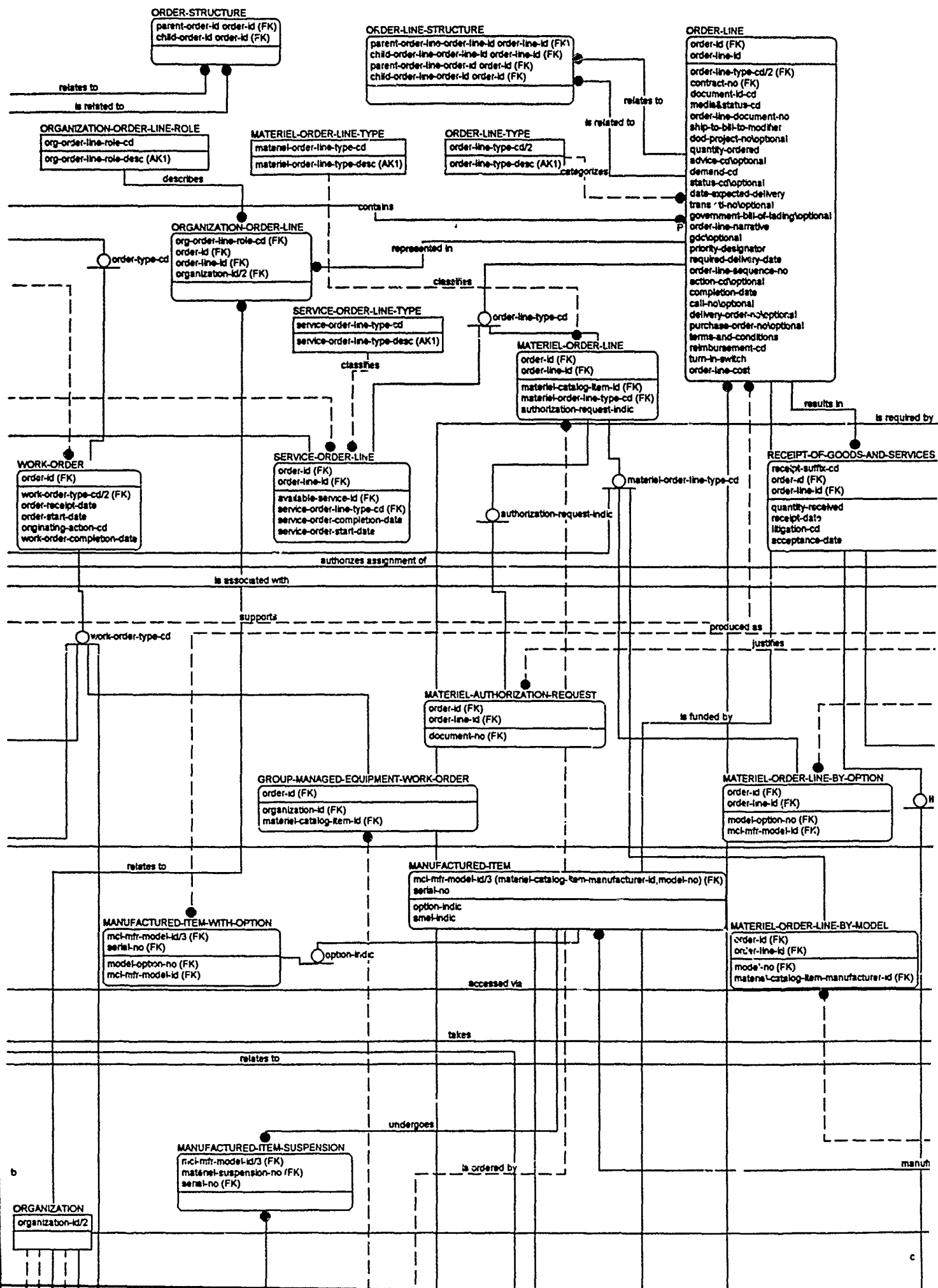
4.2.5 Documentation of Derivable Elements

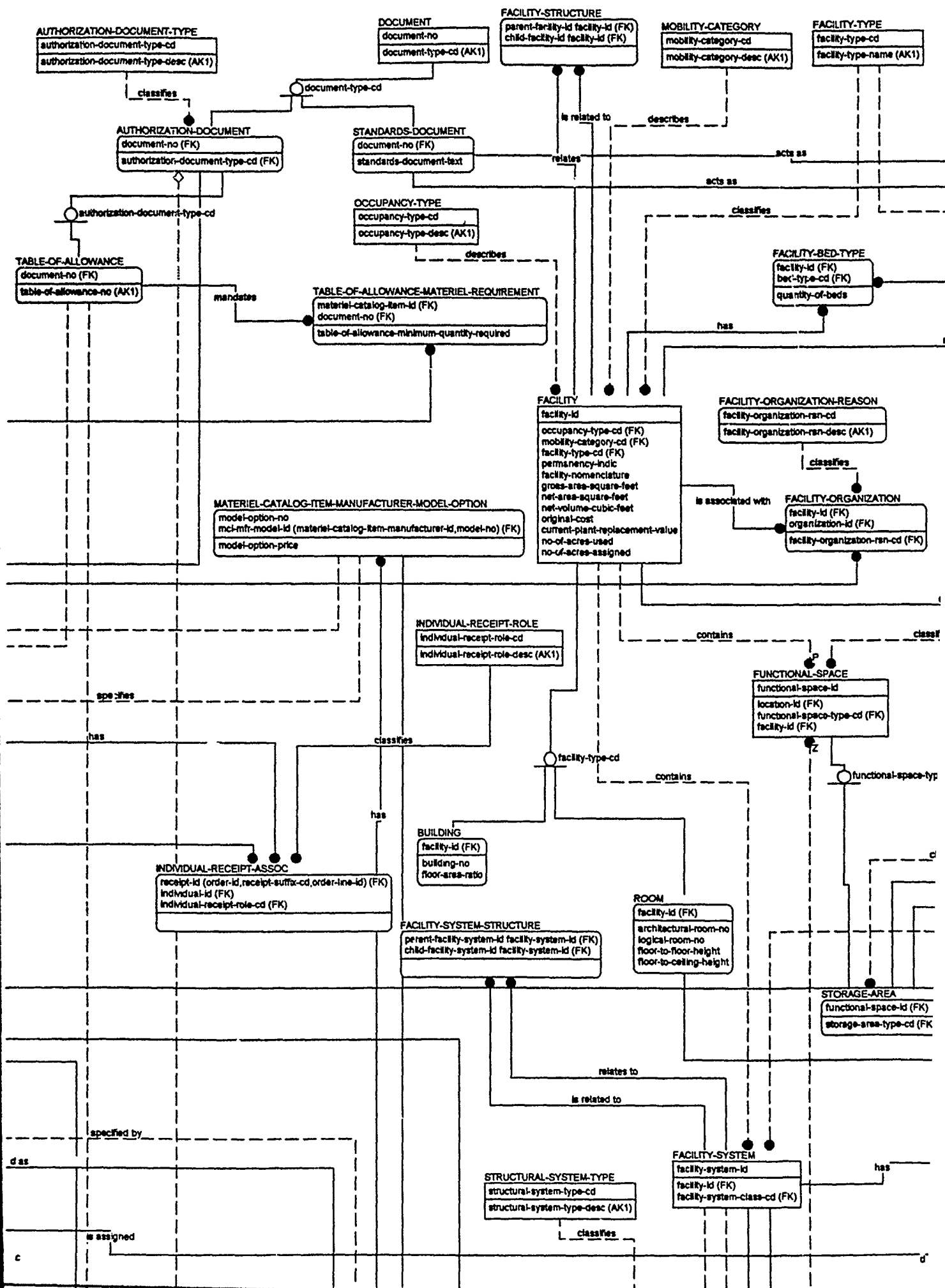
During both the AS-IS and the TO-BE data modeling workshops, a listing of derivable data elements has been developed. Derivable elements are those that can be computed from the "base" attributes in the data model. While there is, in fact, an infinite number of elements that can be derived from a given data model, it is useful to document those elements the workshop participants consider important to the business. Specifying the algorithm for computing an element indicates that the data model supports the business in that area. Section 4.7 contains a representative listing of data elements derivable from the TO-BE data model.

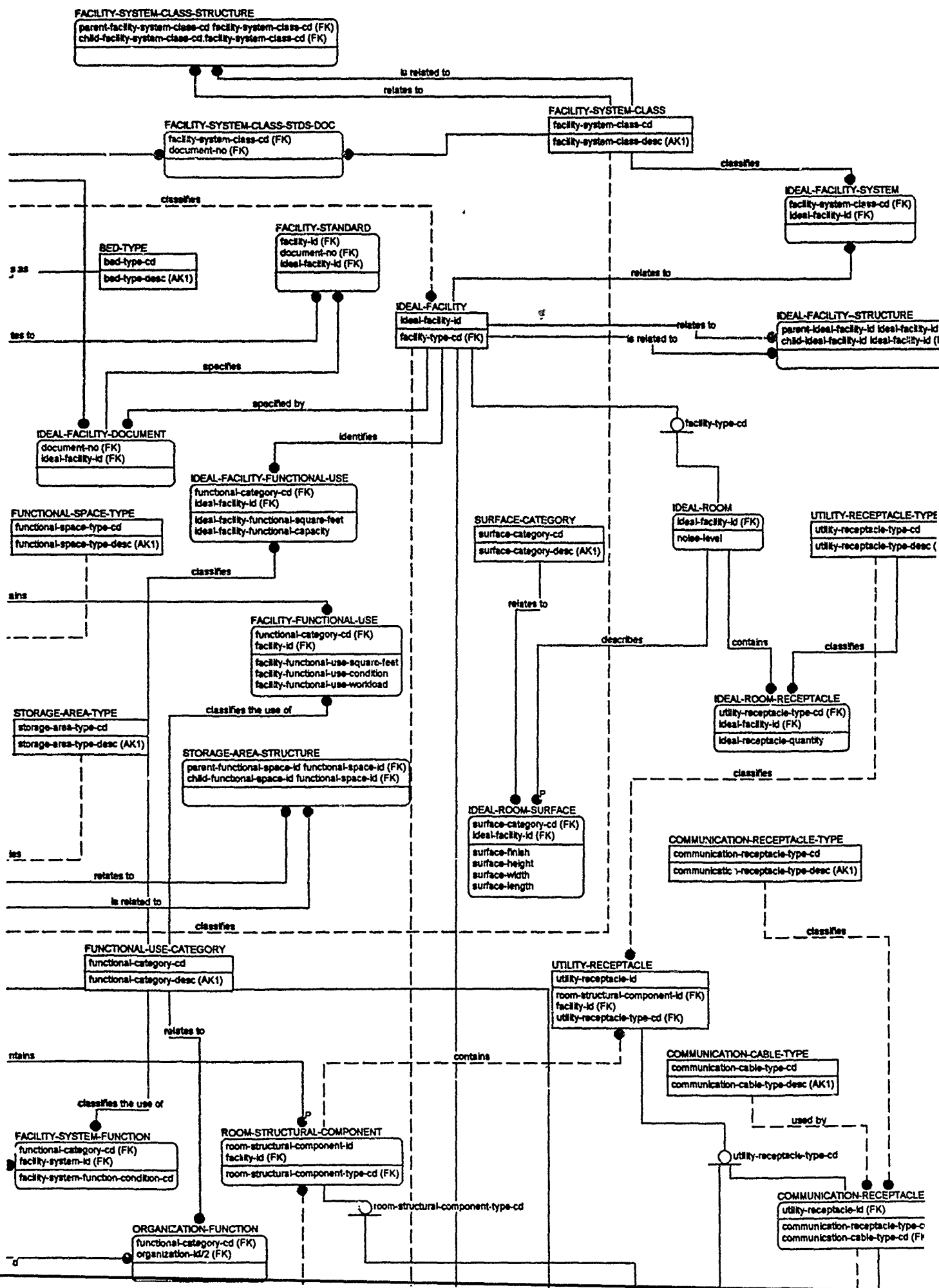
TO-BE Data Model

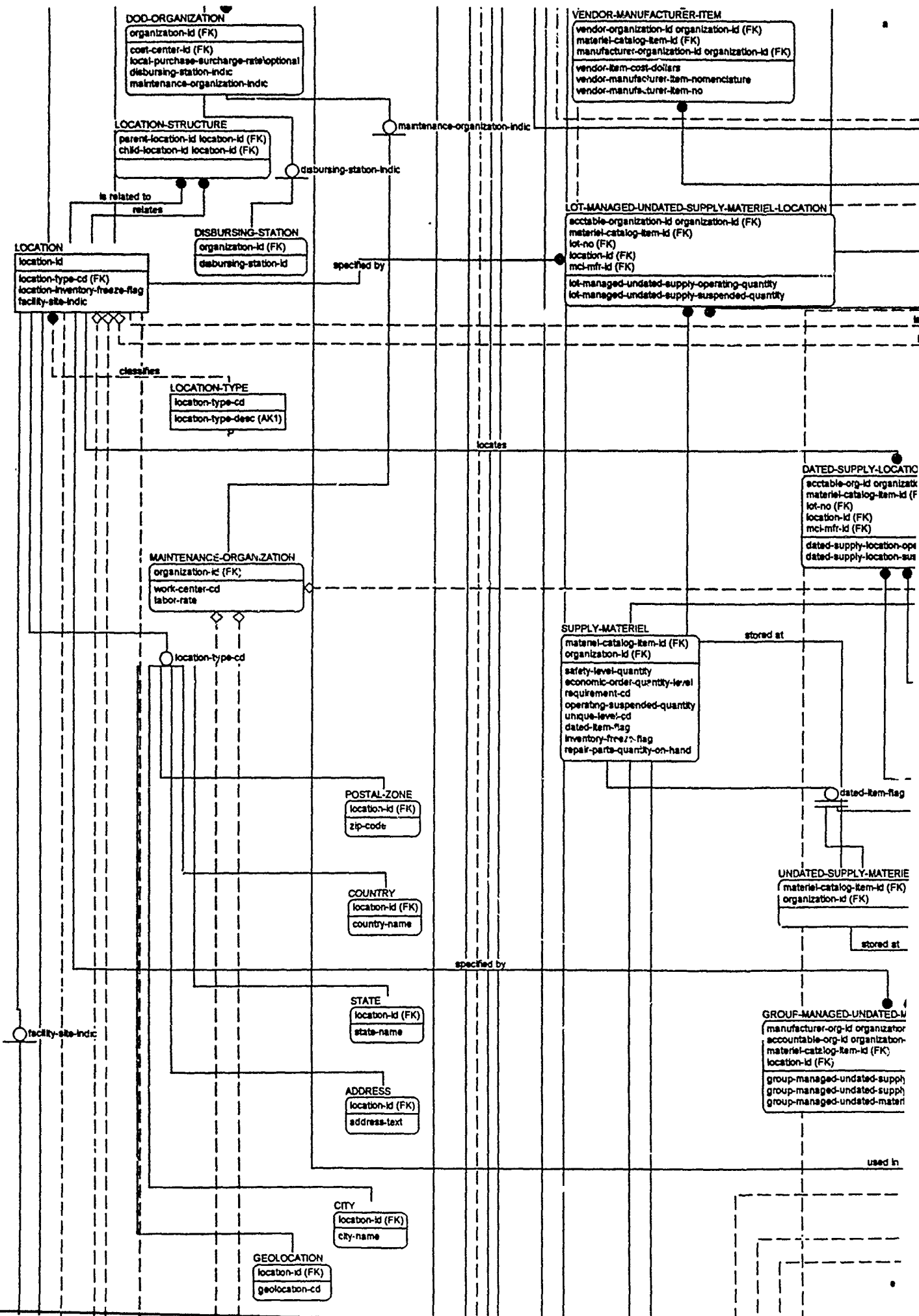


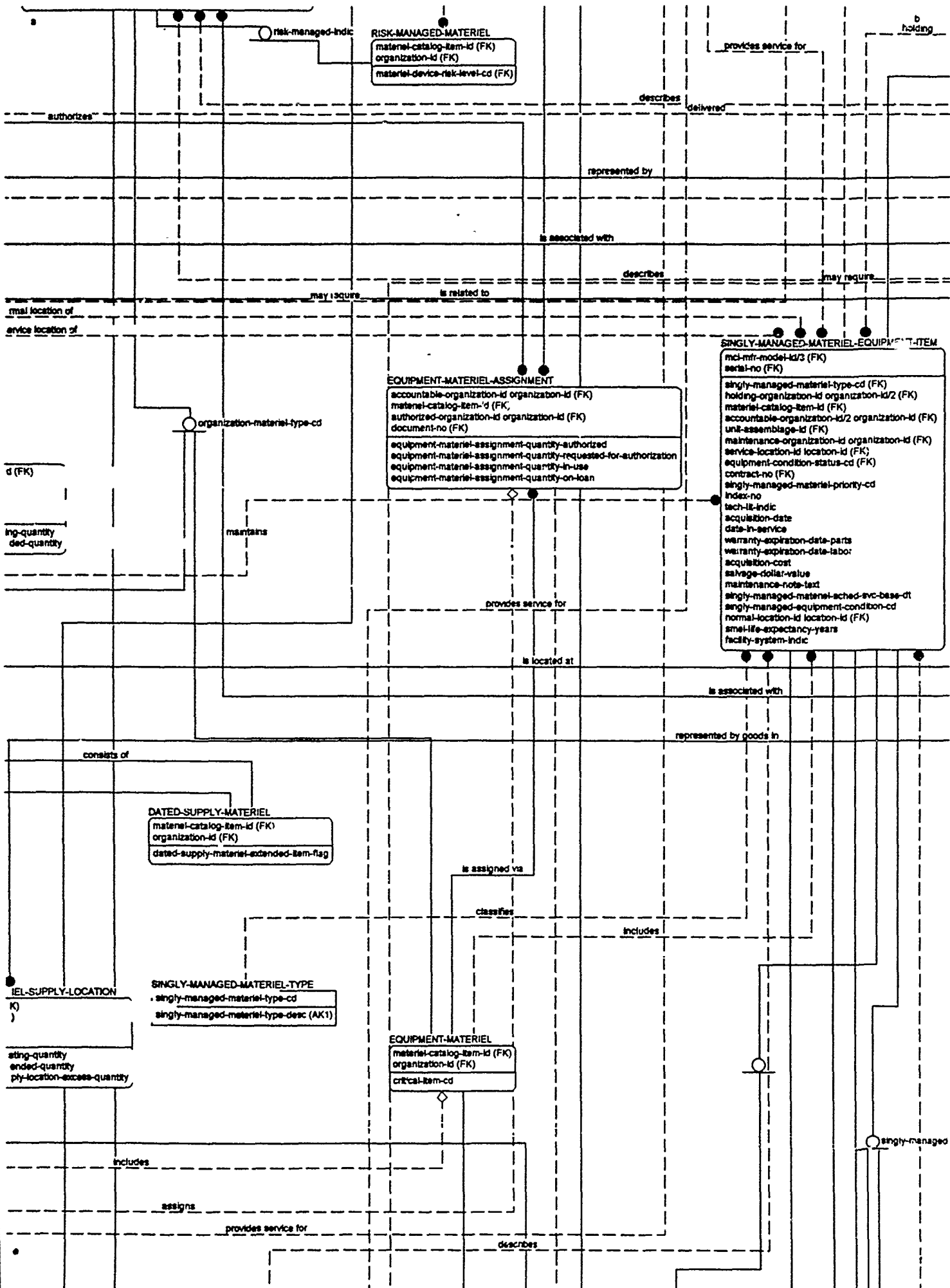


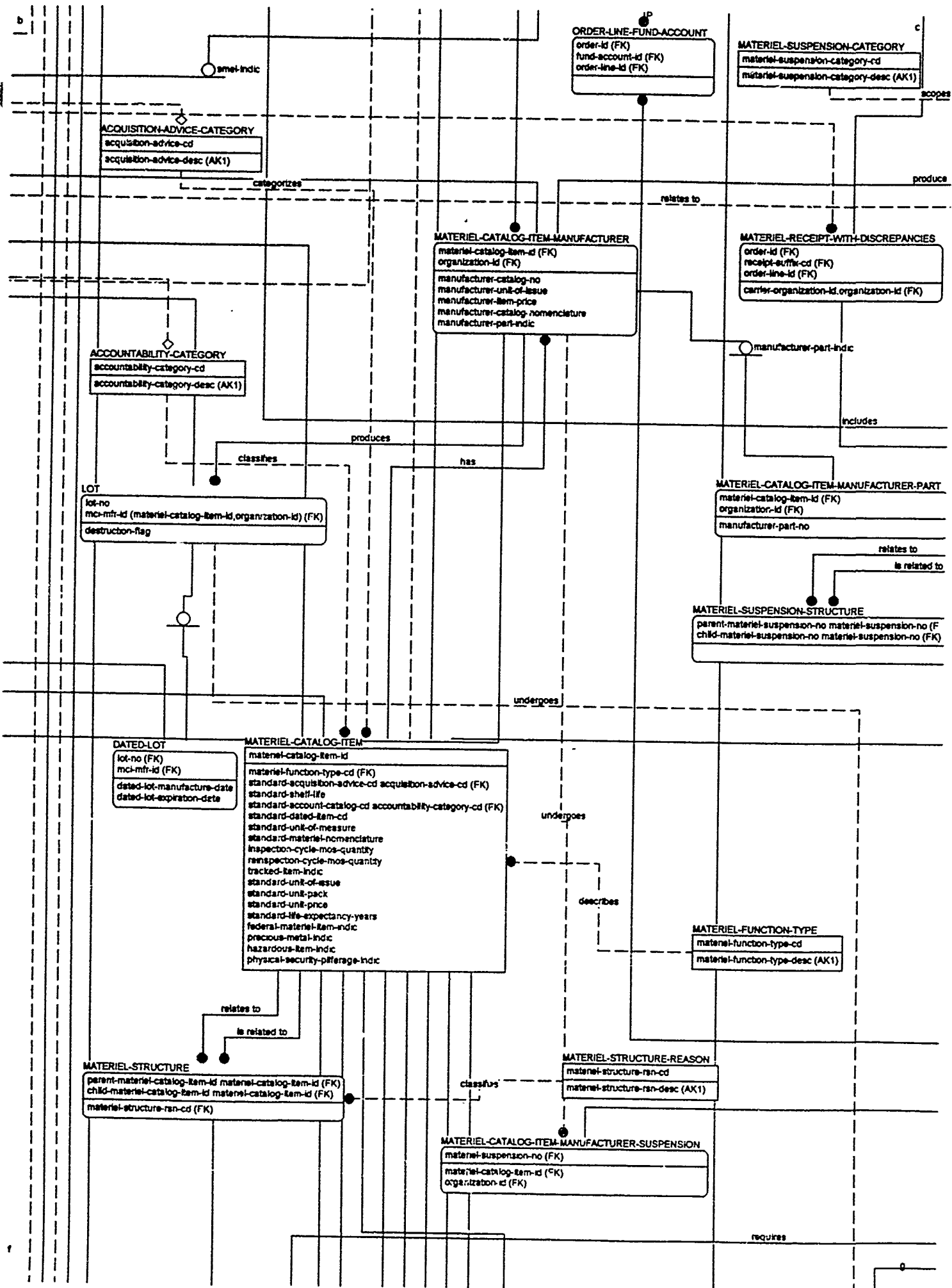












MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL

model-no
materiel-catalog-item-manufacturer-id (materiel-catalog-item-id, organization-id) (FK)
model-desc
manufacturer-model-price

undergoes

facility-system-class-

MATERIEL-SUSPENSION-TYPE

materiel-suspension-type-cd
materiel-suspension-type-desc (AK1)

classifies

FOUNDATION-TYPE

foundation-type-cd
foundation-type-desc (AK1)

classifies

FOUNDATION

facility-system-id (FK)
foundation-type-cd (FK)
composition
foundation-thickness
foundation-depth

contains

STRUCTURAL-SYSTEM

facility-system-id (FK)
structural-system-type-cd (FK)

structural-system-type-cd

SUPERSTRUCTURE

facility-system-id (FK)
no-of-stories

MODEL-OPTION-SUSPENSION

materiel-suspension-no (FK)
mcl-mfr-model-option-id (model-option-no, mcl-mfr-model-id) (FK)

includes

identifies

MATERIEL-SUSPENSION-ACTION

materiel-suspension-action-type-cd (FK)
organization-id (FK)
materiel-suspension-no (FK)
materiel-suspension-action-date
materiel-suspension-action-narrative

materiel-suspension-category-cd

describes

funds

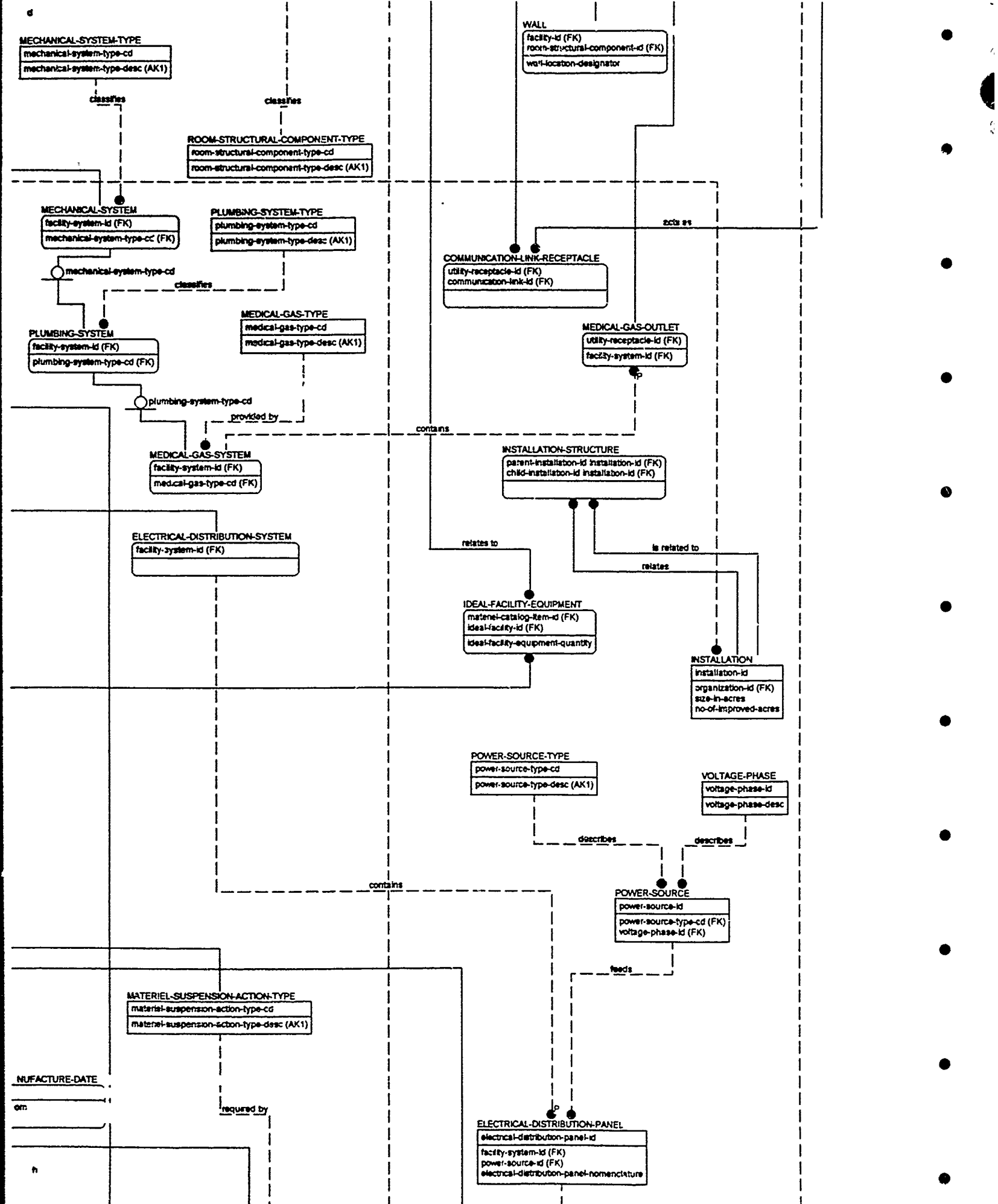
undergoes

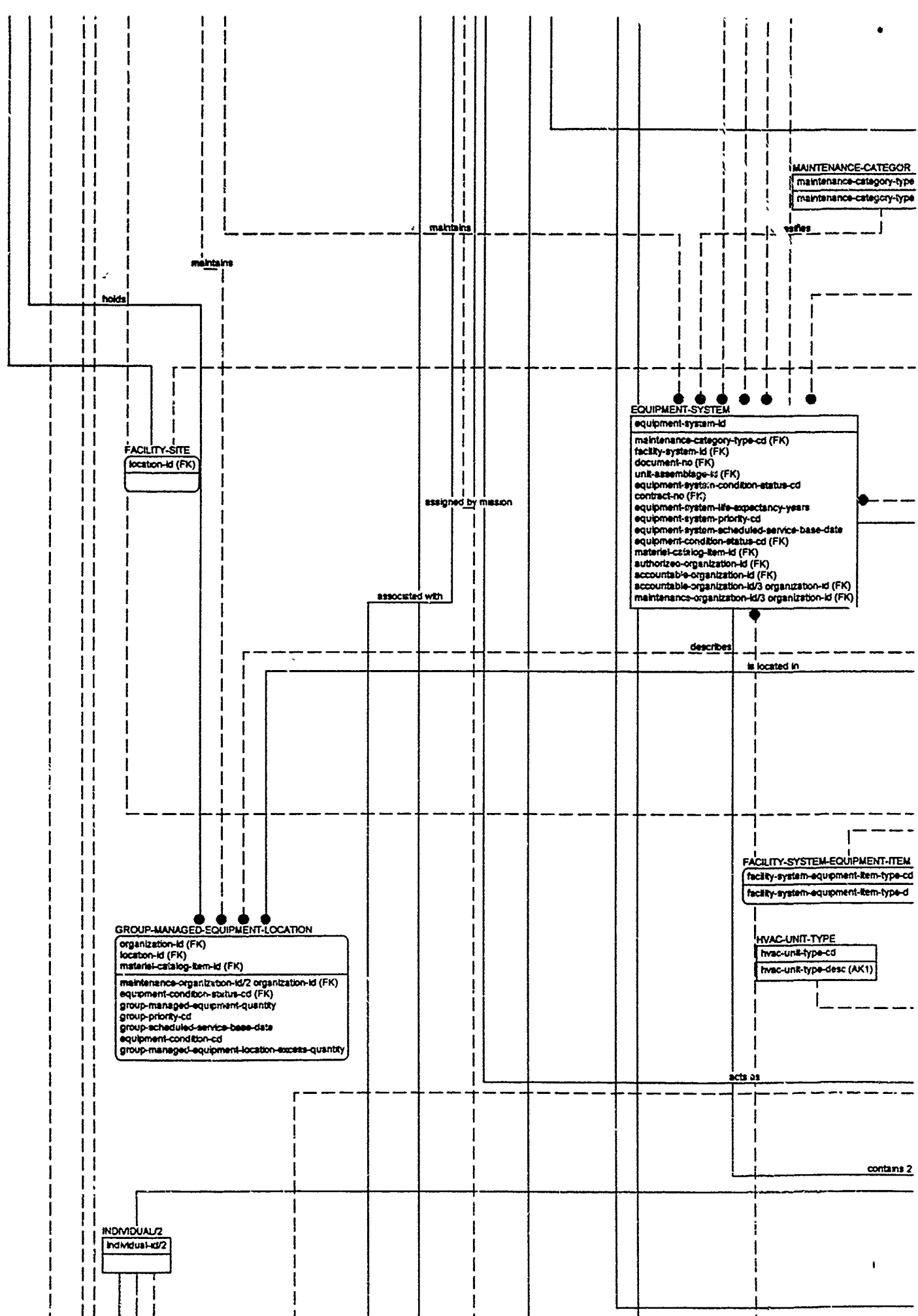
suspension-by-dat

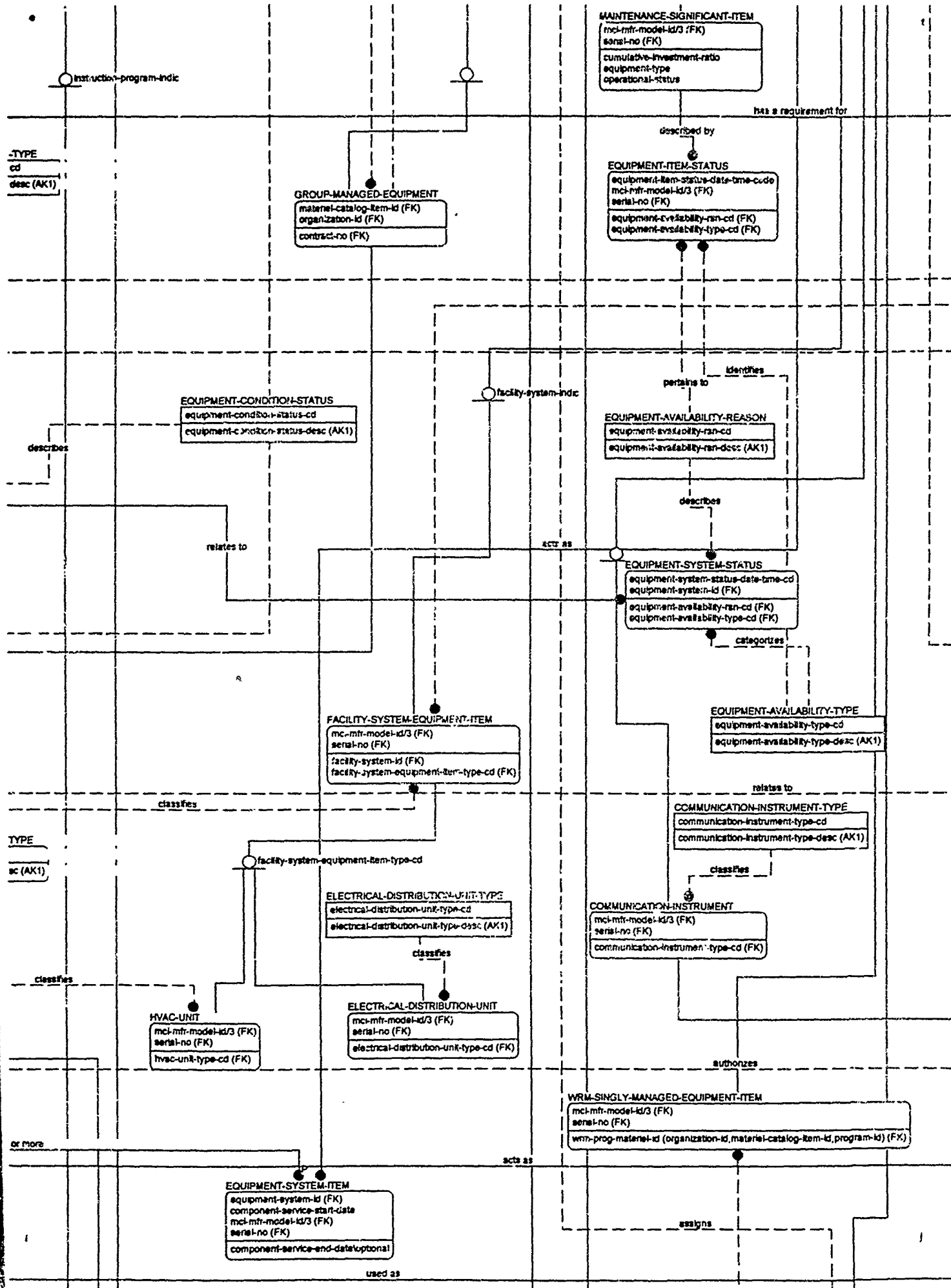
MATERIEL-SUSPENSION-BY-M

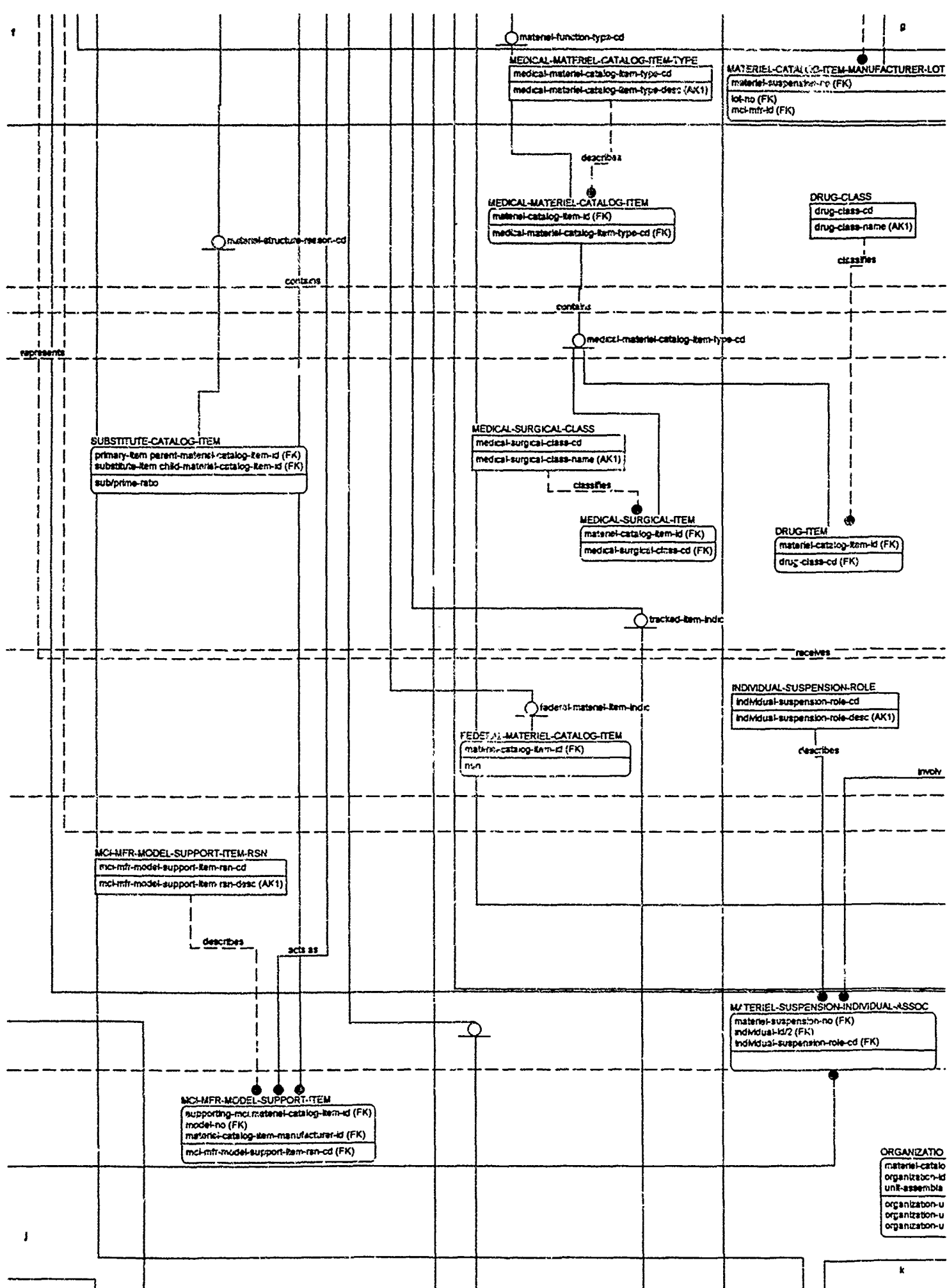
materiel-suspension-no (FK)
manufacture-date-suspension-f
manufacture-date-suspension-t

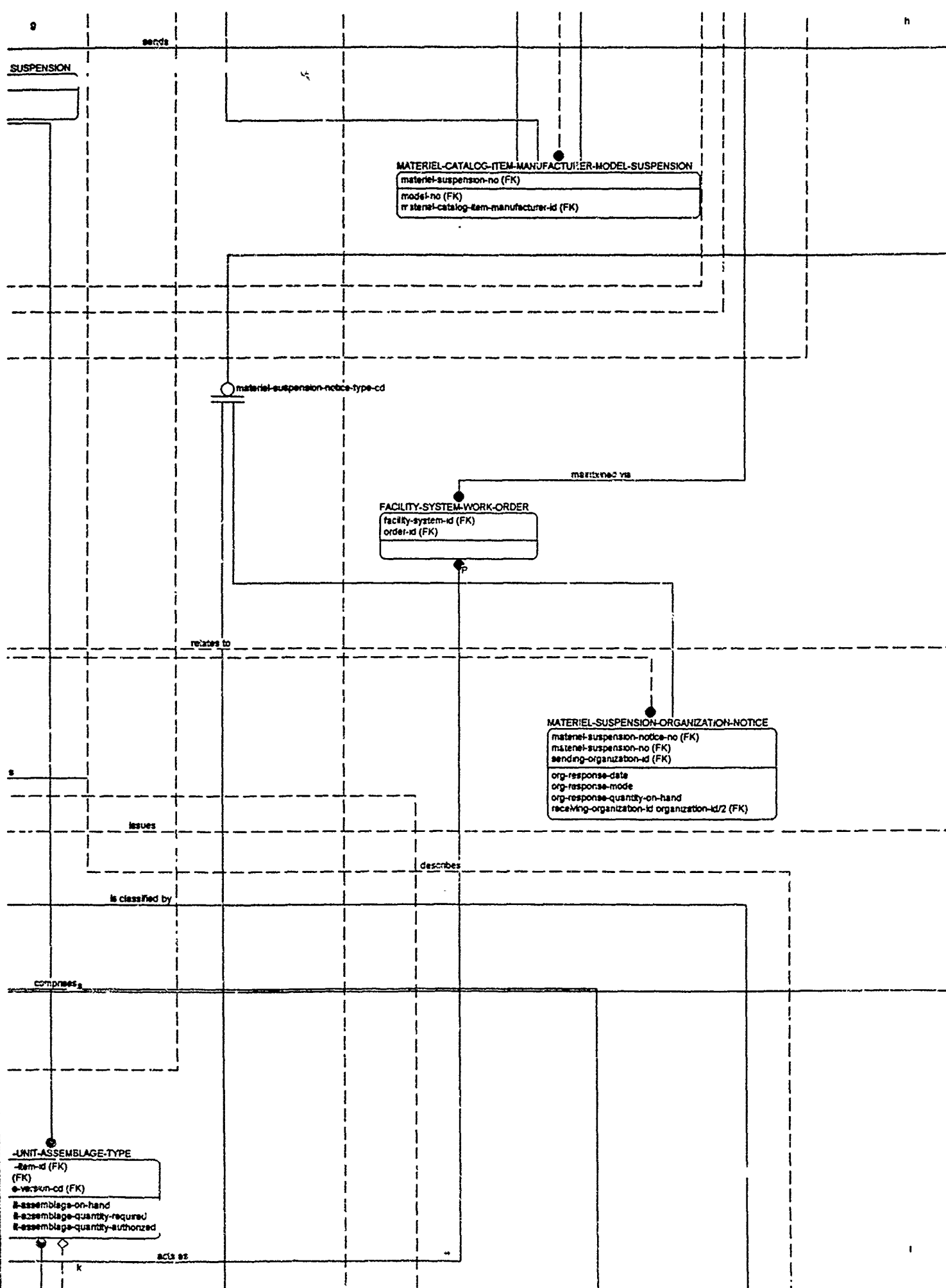
publicized by

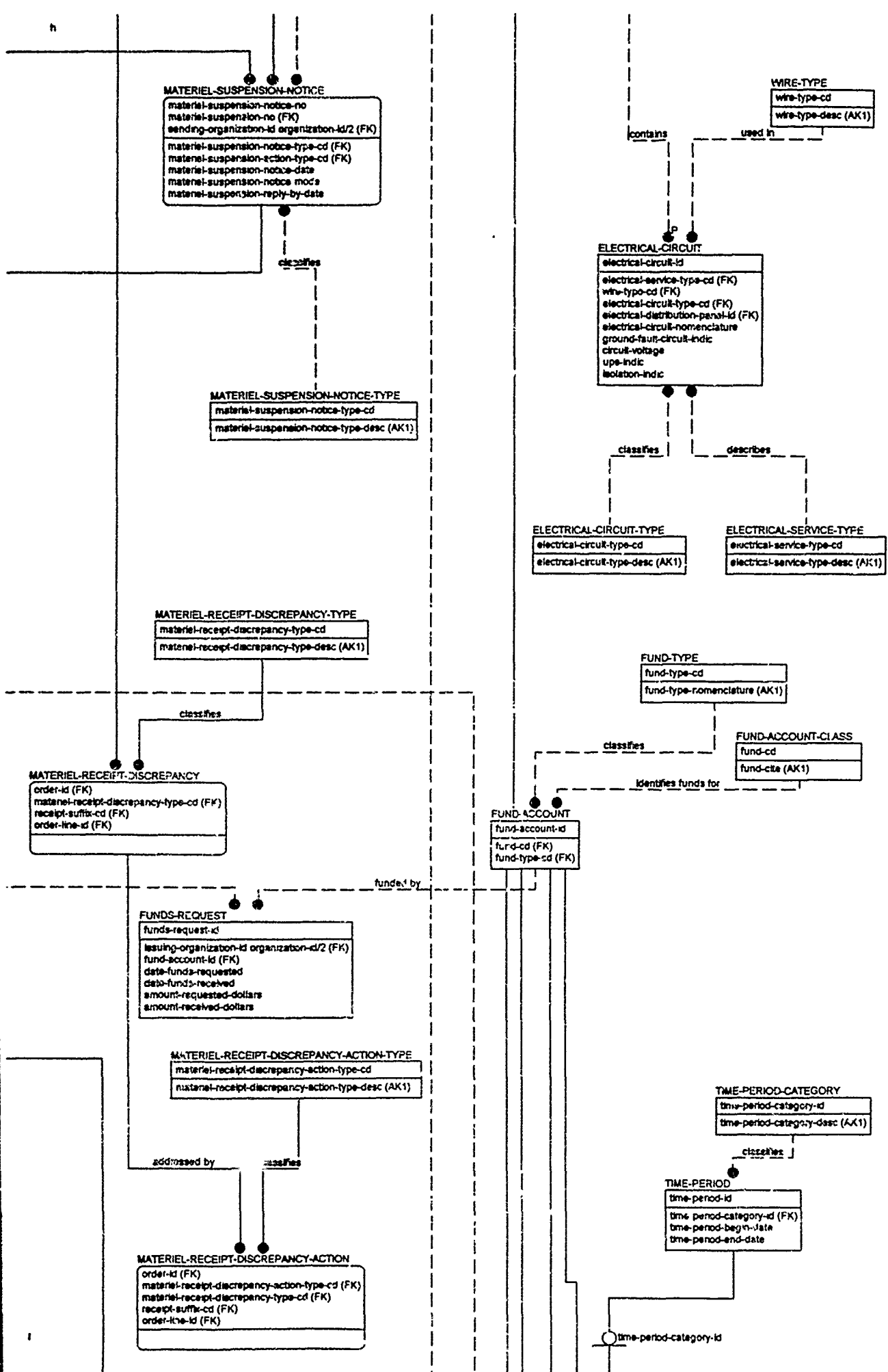


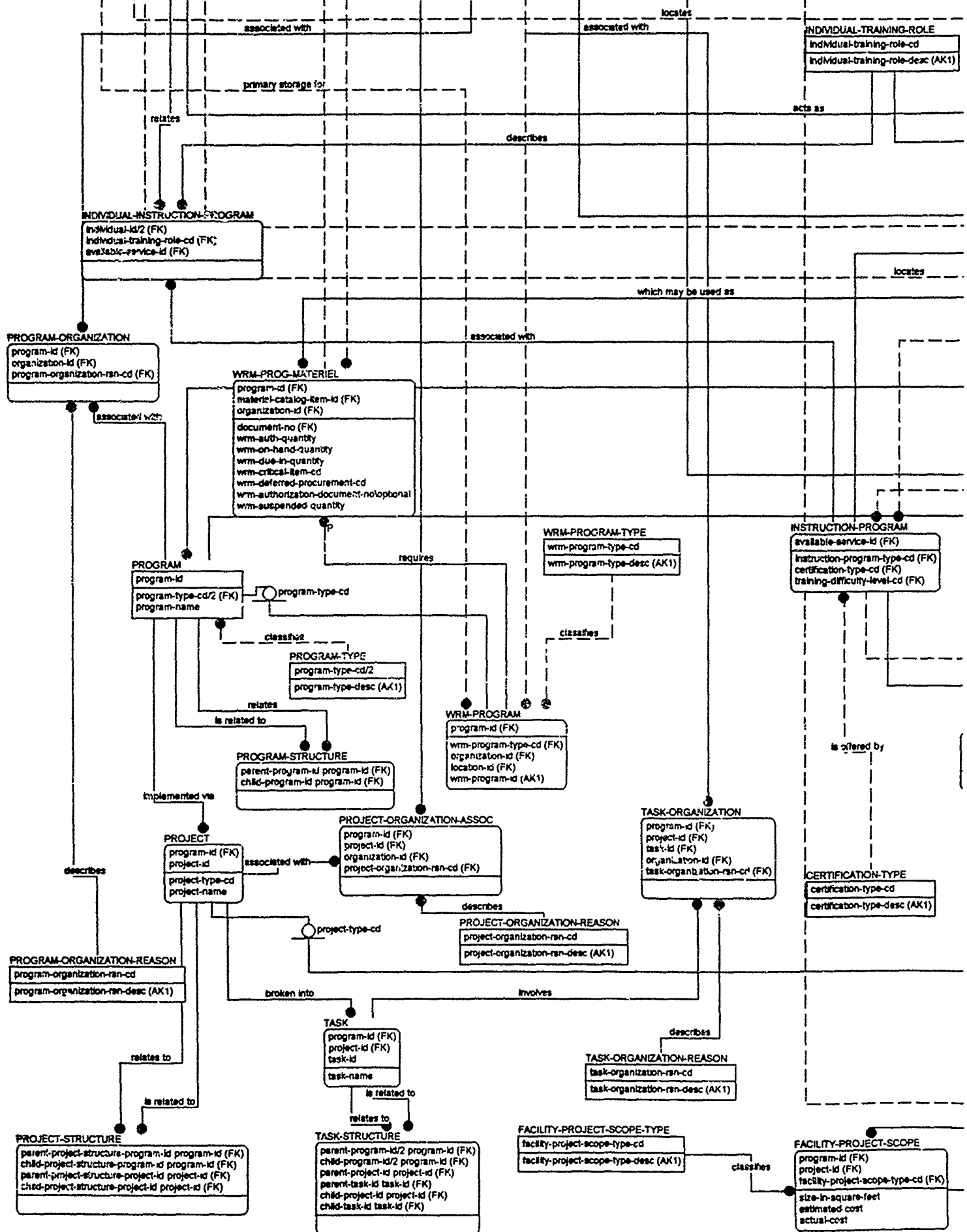


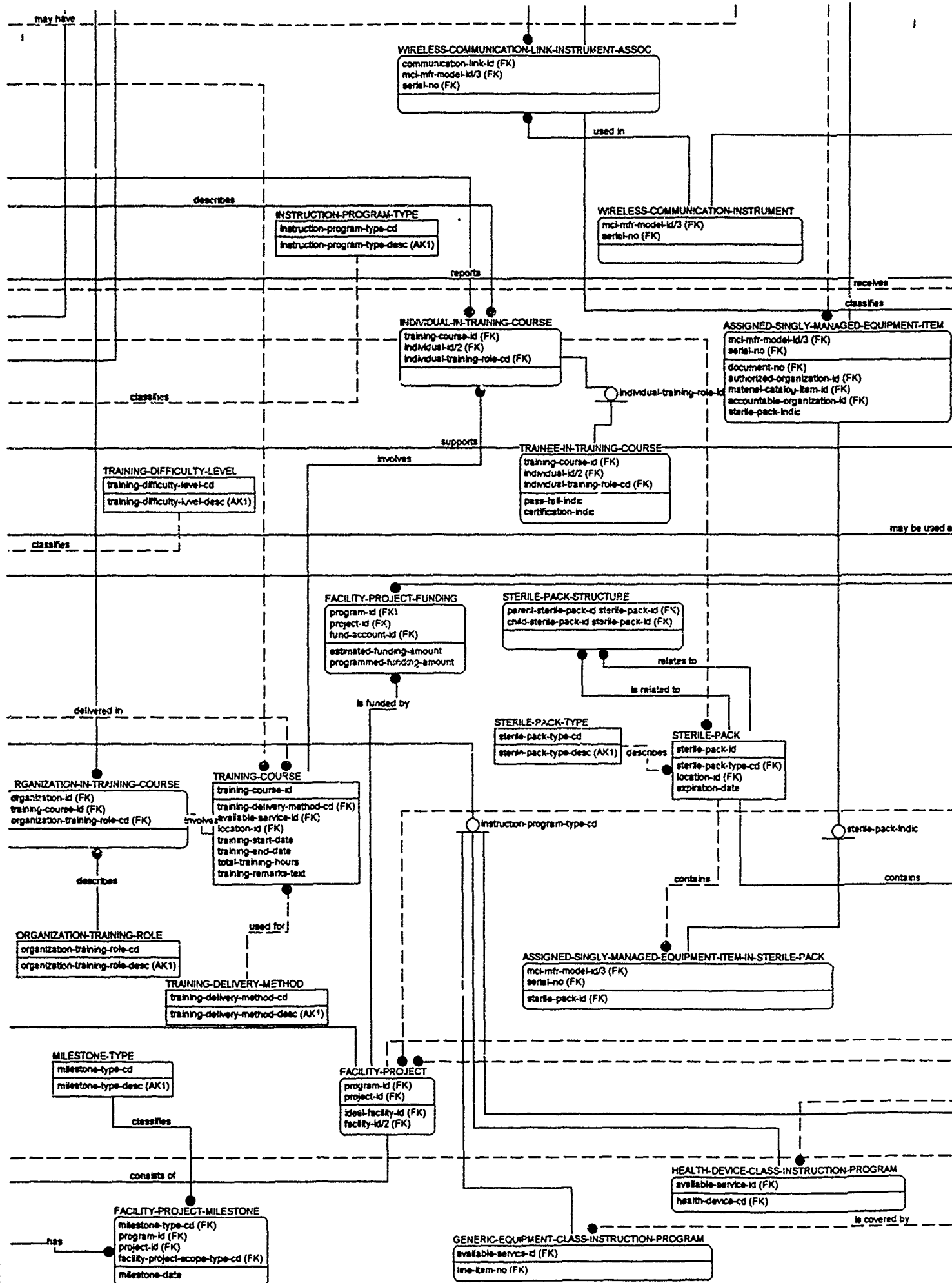


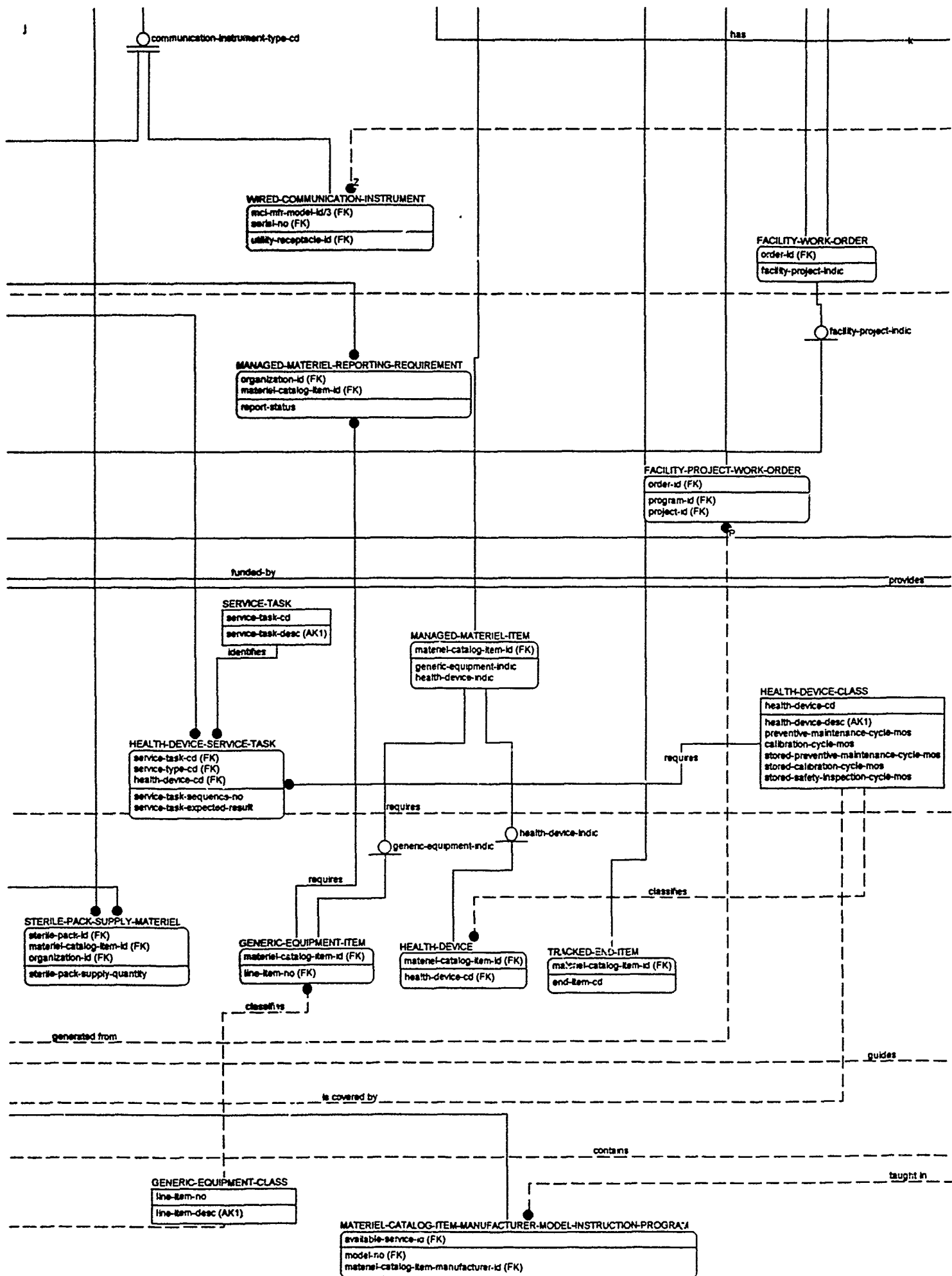


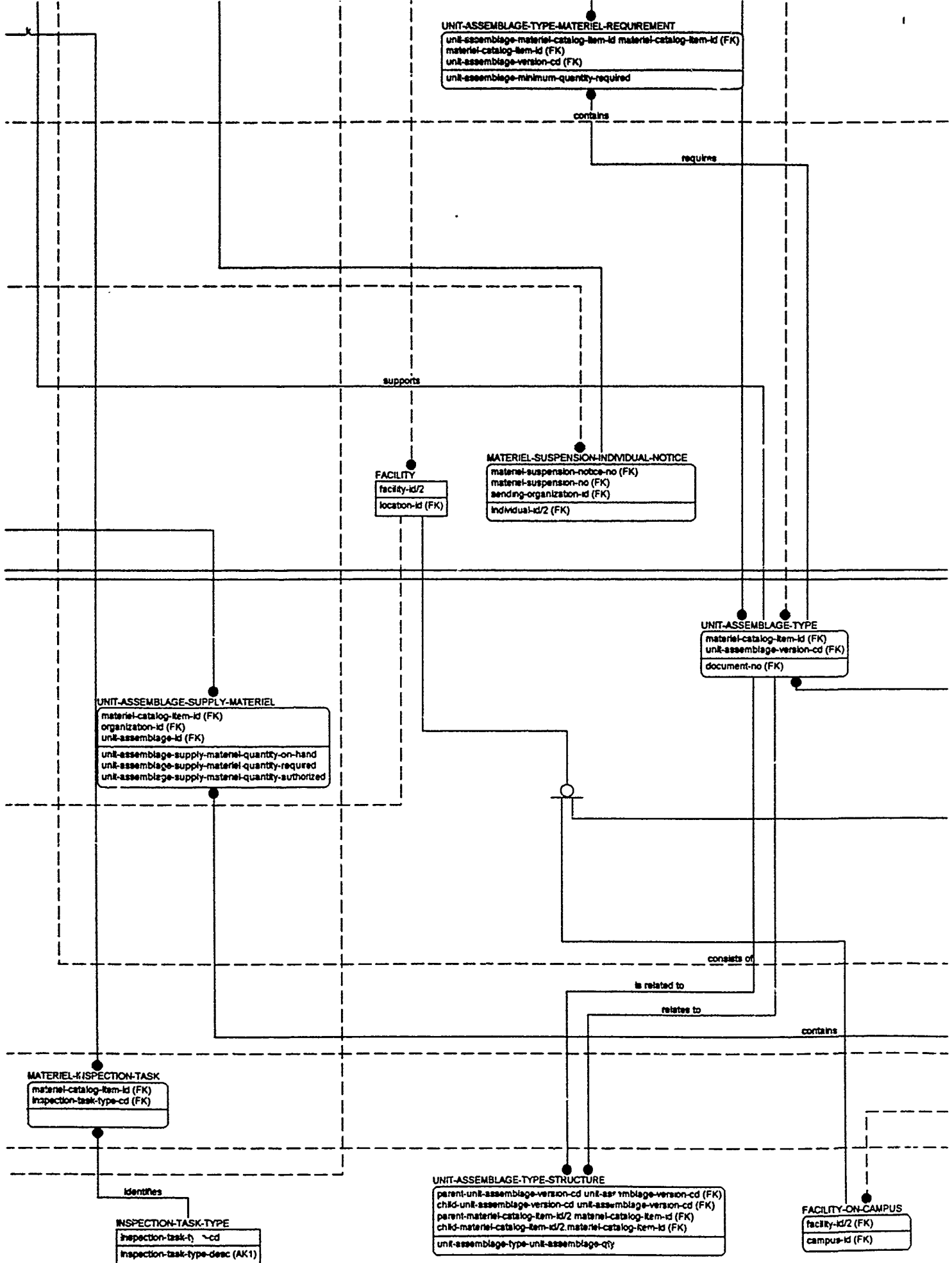


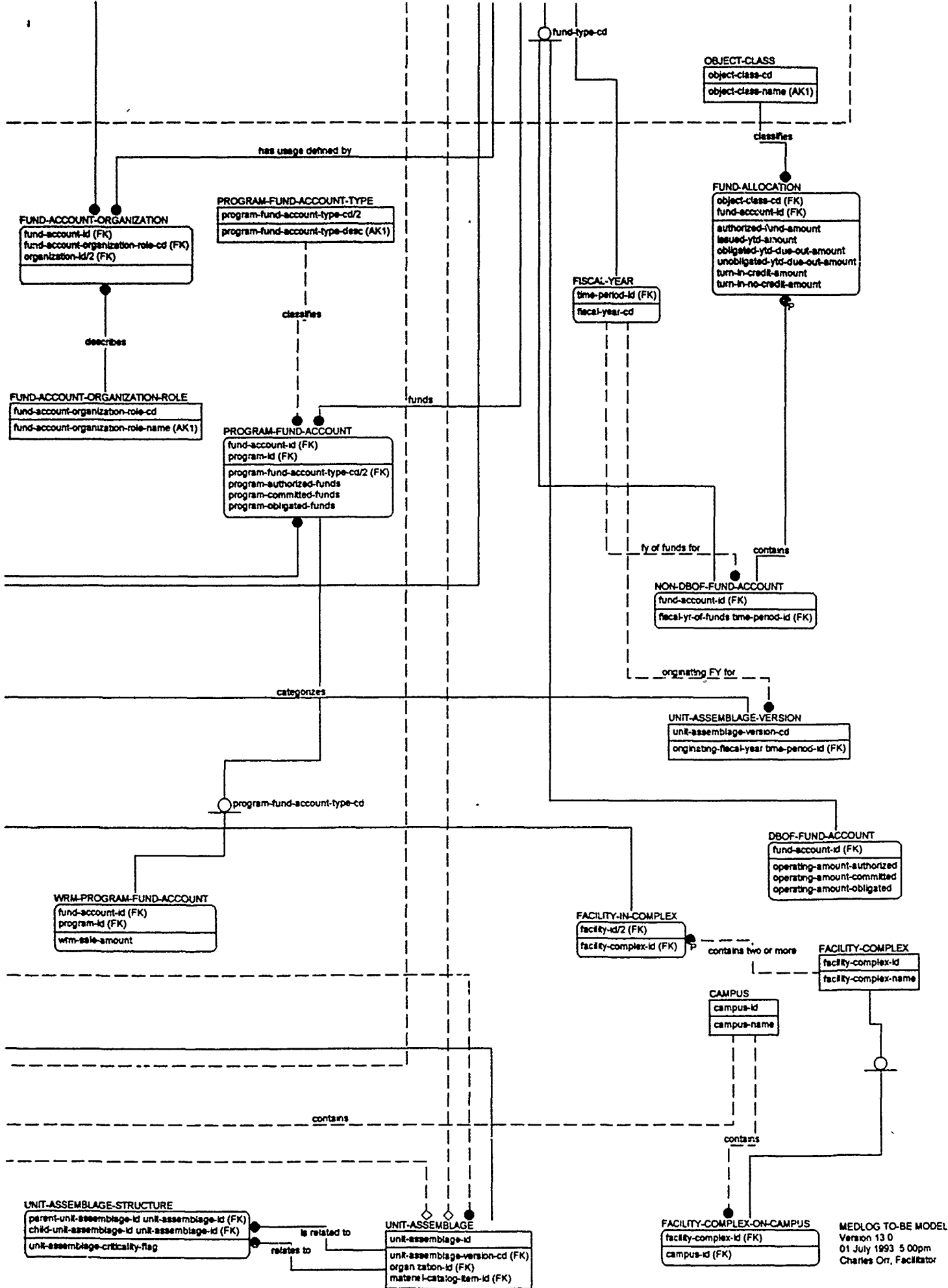












4.3 Entity/Attribute List

Entity:	ACCOUNTABILITY-CATEGORY
Attributes:	accountability-category-cd (PK) accountability-category-desc (AK1)
Entity:	ACQUISITION-ADVICE-CATEGORY
Attributes:	acquisition-advice-cd (PK) acquisition-advice-desc (AK1)
Entity:	ADDRESS
Attributes:	location-id (PK) (FK) address-text
Entity:	ASSIGNED-SINGLY-MANAGED-EQUIPMENT-ITEM
Attributes:	mci-mfr-model-id/3 (PK) (FK) serial-no (PK) (FK) document-no (FK) authorized-organization-id (FK) materiel-catalog-item-id (FK) accountable-organization-id (FK) sterile-pack-indic
Entity:	ASSIGNED-SINGLY-MANAGED-EQUIPMENT-ITEM-IN-STERILE-PACK
Attributes:	mci-mfr-model-id/3 (PK) (FK) serial-no (PK) (FK) sterile-pack-id(FK)
Entity:	AUTHORIZATION-DOCUMENT
Attributes:	document-no (PK) (FK) authorization-document-type-cd(FK)
Entity:	AUTHORIZATION-DOCUMENT-TYPE
Attributes:	authorization-document-type-cd (PK) authorization-document-type-desc (AK1)
Entity:	AVAILABLE-SERVICE
Attributes:	available-service-id (PK) service-schedule-category-cd(FK) service-type-cd (FK) service-category-cd (FK) statement-of-work-template service-nomenclature service-standard-unit-price instruction-program-indic
Entity:	BED-TYPE
Attributes:	bed-type-cd (PK) bed-type-desc (AK1)

Entity:	BUILDING
Attributes:	facility-id (PK) (FK) building-no floor-area-ratio
Entity:	BUYER-VENDOR-CONSTRAINT
Attributes:	buyer (PK) (FK) vendor (PK) (FK) organization-structure-rsn-cd (PK) (FK) daily-dollar-value-maximum-per-item daily-dollar-value-maximum-total
Entity:	CAMPUS
Attributes:	campus-id (PK) campus-name
Entity:	CERTIFICATION-TYPE
Attributes:	certification-type-cd (PK) certification-type-desc (AK1)
Entity:	CITY
Attributes:	location-id (PK) (FK) city-name
Entity:	COMMUNICATION-CABLE-TYPE
Attributes:	communication-cable-type-cd (PK) communication-cable-type-desc (AK1)
Entity:	COMMUNICATION-INSTRUMENT
Attributes:	mci-mfr-model-id/3 (PK) (FK) serial-no (PK) (FK) communication-instrument-type-cd(FK)
Entity:	COMMUNICATION-INSTRUMENT-TYPE
Attributes:	communication-instrument-type-cd (PK) communication-instrument-type-desc (AK1)
Entity:	COMMUNICATION-LINK
Attributes:	communication-link-id (PK) communication-link-type-cd/2(FK)
Entity:	COMMUNICATION-LINK-RECEPTACLE
Attributes:	utility-receptacle-id (PK) (FK) communication-link-id (PK) (FK)
Entity:	COMMUNICATION-LINK-TYPE
Attributes:	communication-link-type-cd/2 (PK) communication-link-type-desc (AK1)

Entity:	COMMUNICATION-RECEPTACLE
Attributes:	utility-receptacle-id (PK) (FK) communication-receptacle-type-cd (FK) communication-cable-type-cd (FK)
Entity:	COMMUNICATION-RECEPTACLE-TYPE
Attributes:	communication-receptacle-type-cd (PK) communication-receptacle-type-desc (AK1)
Entity:	CONTRACT
Attributes:	contract-no (PK) contract-type-cd (FK) statement-of-work-text contract-start-date contract-time-period option-flag
Entity:	CONTRACT-INDIVIDUAL-ASSOC
Attributes:	contract-no (PK) (FK) individual-id (PK) (FK) contract-individual-role-cd (PK)(FK)
Entity:	CONTRACT-INDIVIDUAL-ROLE
Attributes:	contract-individual-role-cd (PK) contract-individual-role-desc (AK1)
Entity:	CONTRACT-TYPE
Attributes:	contract-type-cd (PK) contract-type-desc (AK1)
Entity:	COST-CENTER
Attributes:	cost-center-id (PK) cost-center-name cost-center-cd
Entity:	COUNTRY
Attributes:	location-id (PK) (FK) country-name
Entity:	DATED-LOT
Attributes:	lot-no (PK) (FK) mci-mfr-id (PK) (FK) dated-lot-manufacture-date dated-lot-expiration-date

Entity: DATED-SUPPLY-LOCATION
 Attributes: acctable-org-id (PK) (FK)
 materiel-catalog-item-id (PK)(FK)
 lot-no (PK) (FK)
 location-id (PK) (FK)
 mci-mfr-id (PK) (FK)
 dated-supply-location-operating- quantity
 dated-supply-location-suspended-quantity

Entity: DATED-SUPPLY-MATERIEL
 Attributes: materiel-catalog-item-id (PK) (FK)
 organization-id (PK) (FK)
 dated-supply-materiel-extended-item-flag

Entity: DBOF-FUND-ACCOUNT
 Attributes: fund-account-id (PK) (FK)
 operating-amount-authorized
 operating-amount-committed
 operating-amount-obligated

Entity: DISBURSING-STATION
 Attributes: organization-id (PK) (FK)
 disbursing-station-id

Entity: DOCUMENT
 Attributes: document-no (PK)
 document-type-cd (AK1)

Entity: DOD-ORGANIZATION
 Attributes: organization-id (PK) (FK)
 cost-center-id (FK)
 local-purchase-surcharge-rate\optional
 disbursing-station-indic
 maintenance-organization-indic

Entity: DRUG-CLASS
 Attributes: drug-class-cd (PK)
 drug-class-name (AK1)

Entity: DRUG-ITEM
 Attributes: materiel-catalog-item-id (PK)(FK)
 drug-class-cd (FK)

Entity:	ELECTRICAL-CIRCUIT
Attributes:	electrical-circuit-id (PK) electrical-service-type-cd (FK) wire-type-cd (FK) electrical-circuit-type-cd (FK) electrical-distribution-panel-id (FK) electrical-circuit-nomenclature ground-fault-circuit-indic circuit-voltage ups-indic isolation-indic
Entity:	ELECTRICAL-CIRCUIT-TYPE
Attributes:	electrical-circuit-type-cd (PK) electrical-circuit-type-desc (AK1)
Entity:	ELECTRICAL-DISTRIBUTION-PANEL
Attributes:	electrical-distribution-panel-id(PK) facility-system-id (FK) power-source-id (FK) electrical-distribution-panel-nomenclature
Entity:	ELECTRICAL-DISTRIBUTION-SYSTEM
Attributes:	facility-system-id (PK) (FK)
Entity:	ELECTRICAL-DISTRIBUTION-UNIT
Attributes:	mci-mfr-model-id/3 (PK) (FK) serial-no (PK) (FK) electrical-distribution-unit-type-cd (FK)
Entity:	ELECTRICAL-DISTRIBUTION-UNIT-TYPE
Attributes:	electrical-distribution-unit-type-cd (PK) electrical-distribution-unit-type-desc (AK1)
Entity:	ELECTRICAL-SERVICE-TYPE
Attributes:	electrical-service-type-cd (PK) electrical-service-type-desc (AK1)
Entity:	EMPLOYEE
Attributes:	organization-id (PK) (FK) individual-id (PK) (FK) individual-organization-role-cd (PK) (FK) employee-labor-rate
Entity:	EQUIPMENT-AVAILABILITY-REASON
Attributes:	equipment-availability-rsn-cd (PK) equipment-availability-rsn-desc (AK1)

Entity:	EQUIPMENT-AVAILABILITY-TYPE
Attributes:	equipment-availability-type-cd (PK) equipment-availability-type-desc (AK1)
Entity:	EQUIPMENT-CONDITION-STATUS
Attributes:	equipment-condition-status-cd (PK) equipment-condition-status-desc (AK1)
Entity:	EQUIPMENT-ITEM-STATUS
Attributes:	equipment-item-status-date-time-code (PK) mci-mfr-model-id/3 (PK) (FK) serial-no (PK) (FK) equipment-availability-rsn-cd (FK) equipment-availability-type-cd (FK)
Entity:	EQUIPMENT-MATERIEL
Attributes:	materiel-catalog-item-id (PK) (FK) organization-id (PK) (FK) critical-item-cd
Entity:	EQUIPMENT-MATERIEL-ASSIGNMENT
Attributes:	accountable-organization-id (PK)(FK) materiel-catalog-item-id (PK) (FK) authorized-organization-id (PK)(FK) document-no (PK) (FK) equipment-materiel-assignment-quantity-authorized equipment-materiel-assignment-quantity-requested-for-authorization equipment-materiel-assignment-quantity-in-use equipment-materiel-assignment-quantity-on-loan
Entity:	EQUIPMENT-SYSTEM
Attributes:	equipment-system-id (PK) maintenance-category-type-cd (FK) facility-system-id (FK) document-no (FK) maintenance-organization-id/3 (FK) unit-assemblage-id (FK) equipment-system-condition-status-cd contract-no (FK) equipment-system-life-expectancy-years equipment-system-priority-cd equipment-system-scheduled-service-base-date equipment-condition-status-cd (FK) materiel-catalog-item-id (FK) authorized-organization-id (FK) accountable-organization-id (FK)

Entity:	EQUIPMENT-SYSTEM-ITEM
Attributes:	equipment-system-id (PK) (FK) component-service-start-date (PK) mci_mfr-model-id/3 (PK) (FK) serial-no (PK) (FK) component-service-end-date\optional
Entity:	EQUIPMENT-SYSTEM-STATUS
Attributes:	equipment-system-status-date-time-cd (PK) equipment-system-id (PK) (FK) equipment-availability-rsn-cd (FK) equipment-availability-type-cd (FK)
Entity:	EQUIPMENT-SYSTEM-WORK-ORDER
Attributes:	order-id (PK) (FK) equipment-system-id (FK)
Entity:	FACILITY
Attributes:	facility-id (PK) occupancy-type-cd (FK) mobility-category-cd (FK) facility-type-cd (FK) permanency-indic facility-nomenclature gross-area-square-feet net-area-square-feet net-volume-cubic-feet original-cost current-plant-replacement-value no-of-acres-used no-of-acres-assigned location-id (FK)
Entity:	FACILITY-BED-TYPE
Attributes:	facility-id (PK) (FK) bed-type-cd (PK) (FK) quantity-of-beds
Entity:	FACILITY-COMPLEX
Attributes:	facility-complex-id (PK) facility-complex-name
Entity:	FACILITY-COMPLEX-ON-CAMPUS
Attributes:	facility-complex-id (PK) (FK) campus-id (FK)

Entity:	FACILITY-FUNCTIONAL-USE
Attributes:	functional-category-cd (PK) (FK) facility-id (PK) (FK) facility-functional-use-square-feet facility-functional-use-condition facility-functional-use-workload
Entity:	FACILITY-IN-COMPLEX
Attributes:	facility-id (PK) (FK) facility-complex-id (FK)
Entity:	FACILITY-ON-CAMPUS
Attributes:	facility-id (PK) (FK) campus-id (FK)
Entity:	FACILITY-ORGANIZATION
Attributes:	facility-id (PK) (FK) organization-id (PK) (FK) facility-organization-rsn-cd (FK)
Entity:	FACILITY-ORGANIZATION-REASON
Attributes:	facility-organization-rsn-cd (PK) facility-organization-rsn-desc (AK 1)
Entity:	FACILITY-PROJECT
Attributes:	program-id (PK) (FK) project-id (PK) (FK) ideal-facility-id (FK) facility-id (FK)
Entity:	FACILITY-PROJECT-FUNDING
Attributes:	program-id (PK) (FK) project-id (PK) (FK) fund-account-id (PK) (FK) estimated-funding-amount programmed-funding-amount
Entity:	FACILITY-PROJECT-MILESTONE
Attributes:	milestone-type-cd (PK) (FK) program-id (PK) (FK) project-id (PK) (FK) facility-project-scope-type-cd (PK) (FK) milestone-date

Entity:	FACILITY-PROJECT-SCOPE
Attributes:	program-id (PK) (FK) project-id (PK) (FK) facility-project-scope-type-cd (PK) (FK) size-in-square-feet estimated-cost actual-cost
Entity:	FACILITY-PROJECT-SCOPE-TYPE
Attributes:	facility-project-scope-type-cd (PK) facility-project-scope-type-desc (AK1)
Entity:	FACILITY-PROJECT-WORK-ORDER
Attributes:	order-id (PK) (FK) program-id (FK) project-id (FK)
Entity:	FACILITY-SITE
Attributes:	location-id (PK) (FK)
Entity:	FACILITY-STANDARD
Attributes:	facility-id (PK) (FK) document-no (PK) (FK) ideal-facility-id (PK) (FK)
Entity:	FACILITY-STRUCTURE
Attributes:	parent-facility-id (PK) (FK) child-facility-id (PK) (FK)
Entity:	FACILITY-SYSTEM
Attributes:	facility-system-id (PK) facility-id (FK) facility-system-class-cd (FK)
Entity:	FACILITY-SYSTEM-CLASS
Attributes:	facility-system-class-cd (PK) facility-system-class-desc
Entity:	FACILITY-SYSTEM-CLASS-STDS-DOC
Attributes:	facility-system-class-cd (PK) (FK) document-no (PK) (FK)
Entity:	FACILITY-SYSTEM-CLASS-STRUCTURE
Attributes:	parent-facility-system-class-cd (PK) (FK) child-facility-system-class-cd (PK) (FK)

Entity:	FACILITY-SYSTEM-EQUIPMENT-ITEM
Attributes:	mci-mfr-model-id/3 (PK) (FK) serial-no (PK) (FK) facility-system-id (FK) facility-system-equipment-item-type-cd (FK)
Entity:	FACILITY-SYSTEM-EQUIPMENT-ITEM-TYPE
Attributes:	facility-system-equipment-item-type-cd (PK) facility-system-equipment-item-type-desc (AK1)
Entity:	FACILITY-SYSTEM-FUNCTION
Attributes:	functional-category-cd (PK) (FK) facility-system-id (PK) (FK) facility-system-function-condition-cd
Entity:	FACILITY-SYSTEM-STRUCTURE
Attributes:	parent-facility-system-id (PK)(FK) child-facility-system-id (PK) (FK)
Entity:	FACILITY-SYSTEM-WORK-ORDER
Attributes:	facility-system-id (PK) (FK) order-id (PK) (FK)
Entity:	FACILITY-TYPE
Attributes:	facility-type-cd (PK) facility-type-name (AK1)
Entity:	FACILITY-WORK-ORDER
Attributes:	order-id (PK) (FK) facility-project-indic
Entity:	FEDERAL-MATERIEL-CATALOG-ITEM
Attributes:	materiel-catalog-item-id (PK) (FK) nsn
Entity:	FEDERAL-ORGANIZATION
Attributes:	organization-id (PK) (FK) federal-organization-type-cd (FK)
Entity:	FEDERAL-ORGANIZATION-TYPE
Attributes:	federal-organization-type-cd (PK) federal-organization-type-desc (AK1)
Entity:	FISCAL-YEAR
Attributes:	time-period-id (PK) (FK) fiscal-year-cd

Entity: FOUNDATION
Attributes: facility-system-id (PK) (FK)
foundation-type-cd (FK)
composition
foundation-thickness
foundation-depth

Entity: FOUNDATION-TYPE
Attributes: foundation-type-cd (PK)
foundation-type-desc (AK1)

Entity: FUNCTIONAL-SPACE
Attributes: functional-space-id (PK)
location-id (FK)
functional-space-type-cd (FK)
facility-id (FK)

Entity: FUNCTIONAL-SPACE-TYPE
Attributes: functional-space-type-cd (PK)
functional-space-type-desc (AK1)

Entity: FUNCTIONAL-USE-CATEGORY
Attributes: functional-category-cd (PK)
functional-category-desc (AK1)

Entity: FUND-ACCOUNT
Attributes: fund-account-id (PK)
fund-cd (FK)
fund-type-cd (FK)

Entity: FUND-ACCOUNT-CLASS
Attributes: fund-cd (PK)
fund-cite (AK1)

Entity: FUND-ACCOUNT-ORGANIZATION
Attributes: fund-account-id (PK) (FK)
fund-account-organization-role-cd (PK) (FK)
organization-id/2 (PK) (FK)

Entity: FUND-ACCOUNT-ORGANIZATION-ROLE
Attributes: fund-account-organization-role-cd (PK)
fund-account-organization-role-name (AK1)

Entity: FUND-ACCOUNT-STRUCTURE
Attributes: parent-fund-account-id (PK) (FK)
child-fund-account-id (PK) (FK)

Entity:	FUND-ALLOCATION
Attributes:	object-class-cd (PK) (FK) fund-account-id (PK) (FK) authorized-fund-amount issued-ytd-amount obligated-ytd-due-out-amount unobligated-ytd-due-out-amount turn-in-credit-amount turn-in-no-credit-amount
Entity:	FUND-TYPE
Attributes:	fund-type-cd (PK) fund-type-nomenclature (AK1)
Entity:	FUNDS-REQUEST
Attributes:	funds-request-id (PK) issuing-organization-id (FK) fund-account-id (FK) date-funds-requested date-funds-received amount-requested-dollars amount-received-dollars
Entity:	GENERIC-EQUIPMENT-CLASS
Attributes:	line-item-no (PK) line-item-desc (AK1)
Entity:	GENERIC-EQUIPMENT-CLASS-INSTRUCTION-PROGRAM
Attributes:	available-service-id (PK) (FK) line-item-no (FK)
Entity:	GENERIC-EQUIPMENT-ITEM
Attributes:	materiel-catalog-item-id (PK) (FK) line-item-no (FK)
Entity:	GEOLOCATION
Attributes:	location-id (PK) (FK) geolocation-cd
Entity:	GROUP-MANAGED-EQUIPMENT
Attributes:	materiel-catalog-item-id (PK) (FK) organization-id (PK) (FK) contract-no (FK)

Entity: **GROUP-MANAGED-EQUIPMENT-LOCATION**
 Attributes: **organization-id (PK) (FK)**
location-id (PK) (FK)
materiel-catalog-item-id (PK) (FK)
maintenance-organization-id/2 (FK)
equipment-condition-status-cd (FK)
group-managed-equipment-quantity
group-priority-cd
group-scheduled-service-base-date
equipment-condition-cd/2
group-managed-equipment-location-excess-quantity

Entity: **GROUP-MANAGED-EQUIPMENT-WORK-ORDER**
 Attributes: **order-id (PK) (FK)**
organization-id (FK)
materiel-catalog-item-id (FK)

Entity: **GROUP-MANAGED-UNDATED-MATERIEL-SUPPLY-LOCATION**
 Attributes: **manufacturer-org-id (PK) (FK)**
accountable-org-id (PK) (FK)
materiel-catalog-item-id (PK) (FK)
location-id (PK) (FK)
group-managed-undated-supply-operating-quantity
group-managed-undated-supply-suspended-quantity
group-managed-undated-materiel-supply-location-excess-quantity

Entity: **HEALTH-DEVICE**
 Attributes: **materiel-catalog-item-id (PK) (FK)**
health-device-cd (FK)

Entity: **HEALTH-DEVICE-CLASS**
 Attributes: **health-device-cd (PK)**
health-device-desc (AK1)
preventive-maintenance-cycle-mos
calibration-cycle-mos
stored-preventive-maintenance-cycle-mos
stored-calibration-cycle-mos
stored-safety-inspection-cycle-mos

Entity: **HEALTH-DEVICE-CLASS-INSTRUCTION-PROGRAM**
 Attributes: **available-service-id (PK) (FK)**
health-device-cd (FK)

Entity: **HEALTH-DEVICE-SERVICE-TASK**
 Attributes: **service-task-cd (PK) (FK)**
service-type-cd (PK) (FK)
health-device-cd (PK) (FK)
service-task-sequence-no
service-task-expected-result

Entity:	HVAC-UNIT
Attributes:	mci-mfr-model-id/3 (PK) (FK) serial-no (PK) (FK) hvac-unit-type-cd (FK)
Entity:	HVAC-UNIT-TYPE
Attributes:	hvac-unit-type-cd (PK) hvac-unit-type-desc (AK1)
Entity:	IDEAL-FACILITY
Attributes:	ideal-facility-id (PK) facility-type-cd (FK)
Entity:	IDEAL-FACILITY-STRUCTURE
Attributes:	parent-ideal-facility-id (PK) (FK) child-ideal-facility-id (PK) (FK)
Entity:	IDEAL-FACILITY-DOCUMENT
Attributes:	document-no (PK) (FK) ideal-facility-id (PK) (FK)
Entity:	IDEAL-FACILITY-EQUIPMENT
Attributes:	materiel-catalog-item-id (PK) (FK) ideal-facility-id (PK) (FK) ideal-facility-equipment-quantity
Entity:	IDEAL-FACILITY-FUNCTIONAL-USE
Attributes:	functional-category-cd (PK) (FK) ideal-facility-id (PK) (FK) ideal-facility-functional-square-feet ideal-facility-functional-capacity
Entity:	IDEAL-FACILITY-SYSTEM
Attributes:	facility-system-class-cd (PK) (FK) ideal-facility-id (PK) (FK)
Entity:	IDEAL-ROOM
Attributes:	ideal-facility-id (PK) (FK) noise-level
Entity:	IDEAL-ROOM-RECEPTACLE
Attributes:	utility-receptacle-type-cd (PK) (FK) ideal-facility-id (PK) (FK) ideal-receptacle-quantity

Entity:	IDEAL-ROOM-SURFACE
Attributes:	surface-category-cd (PK) (FK) ideal-facility-id (PK) (FK) surface-finish surface-height surface-width surface-length
Entity:	INDIVIDUAL
Attributes:	individual-id (PK)
Entity:	INDIVIDUAL-COMMUNICATION-LINK-REASON
Attributes:	individual-communication-link-rsn-cd (PK) individual-communication-link-rsn-desc (AK1)
Entity:	INDIVIDUAL-COMMUNICATION-LINK-USAGE
Attributes:	communication-link-id (PK) (FK) individual-id (PK) (FK) individual-communication-link-rsn-cd (FK)
Entity:	INDIVIDUAL-IN-TRAINING-COURSE
Attributes:	training-course-id (PK) (FK) individual-id (PK) (FK) individual-training-role-cd (PK)(FK)
Entity:	INDIVIDUAL-INSTRUCTION-PROGRAM
Attributes:	individual-id (PK) (FK) individual-training-role-cd (PK)(FK) available-service-id (PK) (FK)
Entity:	INDIVIDUAL-LOCATION
Attributes:	location-id (PK) (FK) individual-id (PK) (FK) individual-location-rsn-cd (PK) (FK)
Entity:	INDIVIDUAL-LOCATION-REASON
Attributes:	individual-location-rsn-cd (PK) individual-location-rsn-desc (AK1)
Entity:	INDIVIDUAL-ORGANIZATION-ASSOC
Attributes:	organization-id (PK) (FK) individual-id (PK) (FK) individual-organization-role-cd (PK) (FK)
Entity:	INDIVIDUAL-ORGANIZATION-ROLE
Attributes:	individual-organization-role-cd (PK) individual-organization-role-desc (AK1)

Entity:	INDIVIDUAL-RECEIPT-ASSOC
Attributes:	receipt-id (PK) (FK) individual-id (PK) (FK) individual-receipt-role-cd (PK) (FK)
Entity:	INDIVIDUAL-RECEIPT-ROLE
Attributes:	individual-receipt-role-cd (PK) individual-receipt-role-desc (AK1)
Entity:	INDIVIDUAL-STRUCTURE
Attributes:	parent-individual-id (PK) (FK) child-individual-id (PK) (FK)
Entity:	INDIVIDUAL-SUSPENSION-ROLE
Attributes:	individual-suspension-role-cd (PK) individual-suspension-role-desc (AK1)
Entity:	INDIVIDUAL-TRAINING-ROLE
Attributes:	individual-training-role-cd (PK) individual-training-role-desc
Entity:	INSPECTION-TASK-TYPE
Attributes:	inspection-task-type-cd (PK) inspection-task-type-desc (AK1)
Entity:	INSTALLATION
Attributes:	installation-id (PK) organization-id (FK) size-in-acres no-of-improved-acres
Entity:	INSTALLATION-STRUCTURE
Attributes:	parent-installation-id (PK) (FK) child-installation-id (PK) (FK)
Entity:	INSTRUCTION-PROGRAM
Attributes:	available-service-id (PK) (FK) instruction-program-type-cd (FK) certification-type-cd (FK) training-difficulty-level-cd (FK)
Entity:	INSTRUCTION-PROGRAM-TYPE
Attributes:	instruction-program-type-cd (PK) instruction-program-type-desc (AK1)
Entity:	LOCATION
Attributes:	location-id (PK) location-type-cd (FK) location-inventory-freeze-flag facility-site-indic

Entity:	LOCATION-STRUCTURE
Attributes:	parent-location-id (PK) (FK) child-location-id (PK) (FK)
Entity:	LOCATION-TYPE
Attributes:	location-type-cd (PK) location-type-desc (AK1)
Entity:	LOT
Attributes:	lot-no (PK) mci-mfr-id (PK) (FK) destruction-flag
Entity:	LOT-MANAGED-UNDATED-SUPPLY-MATERIEL-LOCATION
Attributes:	acctable-organization-id (PK) (FK) materiel-catalog-item-.d (PK) (FK) lot-no (PK) (FK) location-id (PK) (FK) mci-mfr-id (PK) (FK) lot-managed-undated-supply-operating-quantity lot-managed-undated-supply-suspended-quantity
Entity:	MAINTENANCE-CATEGORY-TYPE
Attributes:	maintenance-category-type-cd (PK) maintenance-category-type-desc (AK1)
Entity:	MAINTENANCE-ORGANIZATION
Attributes:	organization-id (PK) (FK) work-center-cd labor-rate
Entity:	MAINTENANCE-SIGNIFICANT-ITEM
Attributes:	mci-mfr-model-id/3 (PK) (FK) serial-no (PK) (FK) cumulative-investment-ratio equipment-type operational-status
Entity:	MANAGED-MATERIEL-ITEM
Attributes:	materiel-catalog-item-id (PK) (FK) generic-equipment-indic health-device-indic
Entity:	MANAGED-MATERIEL-REPORTING-REQUIREMENT
Attributes:	organization-id (PK) (FK) materiel-catalog-item-id (PK) (FK) report-status

Entity:	MANUFACTURED-ITEM
Attributes:	mci-mfr-model-id/3 (PK) (FK) serial-no (PK) option-indic smci-indic
Entity:	MANUFACTURED-ITEM-SUSPENSION
Attributes:	mci-mfr-model-id/3 (PK) (FK) materiel-suspension-no (PK) (FK) serial-no (PK) (FK)
Entity:	MANUFACTURED-ITEM-WITH-OPTION
Attributes:	mci-mfr-model-id/3 (PK) (FK) serial-no (PK) (FK) model-option-no (FK) mci-mfr-model-id (FK)
Entity:	MANUFACTURER
Attributes:	organization-id (PK) (FK)
Entity:	MATERIEL-AUTHORIZATION-REQUEST
Attributes:	order-id (PK) (FK) order-line-id (PK) (FK) document-no (FK)
Entity:	MATERIEL-CATALOG-ITEM
Attributes:	materiel-catalog-item-id (PK) materiel-function-type-cd (FK) standard-acquisition-advice-cd (FK) standard-shelf-life standard-account-catalog-cd (FK) standard-dated-item-cd standard-unit-of-measure standard-materiel-nomenclature inspection-cycle-mos-quantity reinspection-cycle-mos-quantity tracked-item-indic standard-unit-of-issue standard-unit-pack standard-unit-price standard-life-expectancy-years federal-materiel-item-indic precious-metal-indic hazardous-item-indic physical-security-pilferage-indic

Entity: MATERIEL-CATALOG-ITEM-MANUFACTURER
Attributes: materiel-catalog-item-id (PK) (FK)
organization-id (PK) (FK)
manufacturer-catalog-no
manufacturer-unit-of-issue
manufacturer-item-price
manufacturer-catalog-nomenclature
manufacturer-part-indic

Entity: MATERIEL-CATALOG-ITEM-MANUFACTURER-LOT-SUSPENSION
Attributes: materiel-suspension-no (PK) (FK)
lot-no (FK)
mci-mfr-id (FK)

Entity: MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL
Attributes: model-no (PK)
materiel-catalog-item-manufacturer-id (PK) (FK)
model-desc
manufacturer-model-price

Entity: MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-
INSTRUCTION-PROGRAM
Attributes: available-service-id (PK) (FK)
model-no (FK)
materiel-catalog-item-manufacturer-id (FK)

Entity: MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-OPTION
Attributes: model-option-no (PK)
mci-mfr-model-id (PK) (FK)
model-option-price

Entity: MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-SUSPENSION
Attributes: materiel-suspension-no (PK) (FK)
model-no (FK)
materiel-catalog-item-manufacturer-id (FK)

Entity: MATERIEL-CATALOG-ITEM-MANUFACTURER-PART
Attributes: materiel-catalog-item-id (PK) (FK)
organization-id (PK) (FK)
manufacturer-part-no

Entity: MATERIEL-CATALOG-ITEM-MANUFACTURER-SUSPENSION
Attributes: materiel-suspension-no (PK) (FK)
materiel-catalog-item-id (FK)
organization-id (FK)

Entity:	MATERIEL-DEVICE-RISK-LEVEL
Attributes:	materiel-device-risk-level-cd (PK) materiel-device-risk-level-desc (AK1) materiel-device-risk-level-factor
Entity:	MATERIEL-FUNCTION-TYPE
Attributes:	materiel-function-type-cd (PK) materiel-function-type-desc (AK1)
Entity:	MATERIEL-INSPECTION-TASK
Attributes:	materiel-catalog-item-id (PK) (FK) inspection-task-type-cd (PK) (FK)
Entity:	MATERIEL-ORDER-LINE
Attributes:	order-id (PK) (FK) order-line-id (PK) (FK) materiel-catalog-item-id (FK) materiel-order-line-type-cd (FK) authorization-request-indic
Entity:	MATERIEL-ORDER-LINE-BY-MANUFACTURER
Attributes:	order-id (PK) (FK) order-line-id (PK) (FK) organization-id (FK)
Entity:	MATERIEL-ORDER-LINE-BY-MODEL
Attributes:	order-id (PK) (FK) order-line-id (PK) (FK) model-no (FK) materiel-catalog-item-manufacturer-id (FK)
Entity:	MATERIEL-ORDER-LINE-BY-OPTION
Attributes:	order-id (PK) (FK) order-line-id (PK) (FK) model-option-no (FK) mci-mfr-model-id (FK)
Entity:	MATERIEL-ORDER-LINE-TYPE
Attributes:	materiel-order-line-type-cd (PK) materiel-order-line-type-desc
Entity:	MATERIEL-RECEIPT-DISCREPANCY
Attributes:	order-id (PK) (FK) materiel-receipt-discrepancy-type-cd (PK) (FK) receipt-suffix-cd (PK) (FK) order-line-id (PK) (FK)

Entity:	MATERIEL-RECEIPT-DISCREPANCY-ACTION
Attributes:	order-id (PK) (FK) materiel-receipt-discrepancy-action-type-cd (PK) (FK) materiel-receipt-discrepancy-type-cd (PK) (FK) receipt-suffix-cd (PK) (FK) order-line-id (PK) (FK)
Entity:	MATERIEL-RECEIPT-DISCREPANCY-ACTION-TYPE
Attributes:	materiel-receipt-discrepancy-action-type-cd (PK) materiel-receipt-discrepancy-action-type-desc (AK1)
Entity:	MATERIEL-RECEIPT-DISCREPANCY-TYPE
Attributes:	materiel-receipt-discrepancy-type-cd (PK) materiel-receipt-discrepancy-type-desc (AK1)
Entity:	MATERIEL-RECEIPT-WITH-DISCREPANCIES
Attributes:	order-id (PK) (FK) receipt-suffix-cd (PK) (FK) order-line-id (PK) (FK) carrier-organization-id (FK)
Entity:	MATERIEL-STRUCTURE
Attributes:	parent-materiel-catalog-item-id (PK) (FK) child-materiel-catalog-item-id (PK) (FK) materiel-structure-rsn-cd (FK)
Entity:	MATERIEL-STRUCTURE-REASON
Attributes:	materiel-structure-rsn-cd (PK) materiel-structure-rsn-desc (AK1)
Entity:	MATERIEL-SUSPENSION
Attributes:	materiel-suspension-no (PK) materiel-suspension-category-cd (FK) materiel-suspension-start-date materiel-suspension-end-date materiel-suspension-rsn-text materiel-suspension-type-cd (FK) suspension-by-date-indic
Entity:	MATERIEL-SUSPENSION-ACTION
Attributes:	materiel-suspension-action-type-cd (PK) (FK) materiel-suspension-no (PK) (FK) organization-id/2 (PK) (FK) materiel-suspension-action-date materiel-suspension-action-narrative
Entity:	MATERIEL-SUSPENSION-ACTION-TYPE
Attributes:	materiel-suspension-action-type-cd (PK) materiel-suspension-action-type-desc (AK1)

Entity: MATERIEL-SUSPENSION-BY-MANUFACTURE-DATE
 Attributes: materiel-suspension-no (PK) (FK)
 manufacture-date-suspension-from
 manufacture-date-suspension-to

Entity: MATERIEL-SUSPENSION-CATEGORY
 Attributes: materiel-suspension-category-cd (PK)
 materiel-suspension-category-desc (AK1)

Entity: MATERIEL-SUSPENSION-INDIVIDUAL-ASSOC
 Attributes: materiel-suspension-no (PK) (FK)
 individual-id/2 (PK) (FK)
 individual-suspension-role-cd (PK) (FK)

Entity: MATERIEL-SUSPENSION-INDIVIDUAL-NOTICE
 Attributes: materiel-suspension-notice-no (PK) (FK)
 materiel-suspension-no (PK) (FK)
 sending-organization-id (PK) (FK)
 individual-id/2 (FK)

Entity: MATERIEL-SUSPENSION-NOTICE
 Attributes: materiel-suspension-notice-no (PK)
 materiel-suspension-no (PK) (FK)
 sending-organization-id (PK) (FK)
 materiel-suspension-notice-type-cd (FK)
 materiel-suspension-action-type-cd (FK)
 materiel-suspension-notice-date
 materiel-suspension-notice-mode
 materiel-suspension-reply-by-date

Entity: MATERIEL-SUSPENSION-NOTICE-TYPE
 Attributes: materiel-suspension-notice-type-cd (PK)
 materiel-suspension-notice-type-desc (AK1)

Entity: MATERIEL-SUSPENSION-ORGANIZATION
 Attributes: organization-id (PK) (FK)
 materiel-suspension-no (PK) (FK)
 organization-suspension-reference-no

Entity: MATERIEL-SUSPENSION-ORGANIZATION-ASSOC
 Attributes: organization-id (PK) (FK)
 materiel-suspension-no (PK) (FK)
 organization-suspension-role-cd (PK) (FK)

Entity: MATERIEL-SUSPENSION-ORGANIZATION-NOTICE
 Attributes: materiel-suspension-notice-no (PK) (FK)
 materiel-suspension-no (PK) (FK)
 sending-organization-id (PK) (FK)
 org-response-date
 org-response-mode
 org-response-quantity-on-hand
 receiving-organization-id (FK)

Entity: MATERIEL-SUSPENSION-STRUCTURE
 Attributes: parent-materiel-suspension-no (PK) (FK)
 child-materiel-suspension-no (PK) (FK)

Entity: MATERIEL-SUSPENSION-TYPE
 Attributes: materiel-suspension-type-cd (PK)
 materiel-suspension-type-desc (AK1)

Entity: MCI-MFR-MODEL-SUPPORT-ITEM
 Attributes: mci-mfr-model-support-item-rsn-cd (FK)
 materiel-catalog-item-id (PK) (FK)
 model-no (PK) (FK)
 materiel-catalog-item-manufacturer-id (PK) (FK)

Entity: MCI-MFR-MODEL-SUPPORT-ITEM-RSN
 Attributes: mci-mfr-model-support-item-rsn-cd (PK)
 mci-mfr-model-support-item-rsn-desc (AK1)

Entity: MECHANICAL-SYSTEM
 Attributes: facility-system-id (PK) (FK)
 mechanical-system-type-cd (FK)

Entity: MECHANICAL-SYSTEM-TYPE
 Attributes: mechanical-system-type-cd (PK)
 mechanical-system-type-desc (AK1)

Entity: MEDICAL-GAS-OUTLET
 Attributes: utility-receptacle-id (PK) (FK)
 facility-system-id (FK)

Entity: MEDICAL-GAS-SYSTEM
 Attributes: facility-system-id (PK) (FK)
 medical-gas-type-cd (FK)

Entity: MEDICAL-GAS-TYPE
 Attributes: medical-gas-type-cd (PK)
 medical-gas-type-desc (AK1)

Entity: MEDICAL-MATERIEL-CATALOG-ITEM
 Attributes: materiel-catalog-item-id (PK) (FK)
 medical-materiel-catalog-item-type-cd (FK)

Entity:	MEDICAL-MATERIEL-CATALOG-ITEM-TYPE
Attributes:	medical-materiel-catalog-item-type-cd (PK) medical-materiel-catalog-item-type-desc (AK1)
Entity:	MEDICAL-SURGICAL-CLASS
Attributes:	medical-surgical-class-cd (PK) medical-surgical-class-name (AK1)
Entity:	MEDICAL-SURGICAL-ITEM
Attributes:	materiel-catalog-item-id (PK) (FK) medical-surgical-class-cd (FK)
Entity:	MILESTONE-TYPE
Attributes:	milestone-type-cd (PK) milestone-type-desc (AK1)
Entity:	MOBILITY-CATEGORY
Attributes:	mobility-category-cd (PK) mobility-category-desc (AK1)
Entity:	MODEL-OPTION-SUSPENSION
Attributes:	materiel-suspension-no (PK) (FK) mci-mfr-model-option-id (PK) (FK)
Entity:	NON-DBOF-FUND-ACCOUNT
Attributes:	fund-account-id (PK) (FK) fiscal-yr-of-funds (FK)
Entity:	OBJECT-CLASS
Attributes:	object-class-cd (PK) object-class-name (AK1)
Entity:	OCCUPANCY-TYPE
Attributes:	occupancy-type-cd (PK) occupancy-type-desc (AK1)
Entity:	ORDER
Attributes:	order-id (PK) order-type-cd (FK) order-placement-date
Entity:	ORDER-INDIVIDUAL
Attributes:	order-id (PK) (FK) individual-id (PK) (FK) order-individual-role-cd (PK) (FK)
Entity:	ORDER-INDIVIDUAL-ROLE
Attributes:	order-individual-role-cd (PK) order-individual-role-name (AK1)

Entity: ORDER-LINE
 Attributes: order-id (PK) (FK)
 order-line-id (PK)
 order-line-type-cd/2 (FK)
 contract-no (FK)
 document-id-cd
 media&status-cd
 order-line-document-no
 ship-to-bill-to-modifier
 dod-project-no\optional
 quantity-ordered
 advice-cd\optional
 demand-cd
 status-cd\optional
 date-expected-delivery
 trans-ctl-no\optional
 government-bill-of-lading\optional
 order-line-narrative
 gdc\optional
 priority-designator
 required-delivery-date
 order-line-sequence-no
 action-cd\optional
 completion-date
 call-no\optional
 delivery-order-no\optional
 purchase-order-no\optional
 terms-and-conditions
 reimbursement-cd
 turn-in-switch
 order-line-cost

Entity: ORDER-LINE-FUND-ACCOUNT
 Attributes: order-id (PK) (FK)
 fund-account-id (PK) (FK)
 order-line-id (PK) (FK)

Entity: ORDER-LINE-STRUCTURE
 Attributes: parent-order-line-order-line-id (PK) (FK)
 child-order-line-order-line-id (PK) (FK)
 parent-order-line-order-id (PK) (FK)
 child-order-line-order-id (PK) (FK)

Entity: ORDER-LINE-TYPE
 Attributes: order-line-type-cd/2 (PK)
 order-line-type-desc (AK1)

Entity: ORDER-STRUCTURE
 Attributes: parent-order-id (PK) (FK)
 child-order-id (PK) (FK)

Entity:	ORDER-TYPE
Attributes:	order-type-cd (PK) order-type-desc (AK1)
Entity:	ORGANIZATION
Attributes:	organization-id (PK) unit-type-cd (FK) routing-identifier-cd organization-name organization-category-cd (FK) supplier-indic
Entity:	ORGANIZATION-CATEGORY
Attributes:	organization-category-cd (PK) organization-category-desc (AK1)
Entity:	ORGANIZATION-COMMUNICATION-LINK-REASON
Attributes:	organization-communication-link-rsn-cd (PK) organization-communication-link-rsn-desc (AK1)
Entity:	ORGANIZATION-COMMUNICATION-LINK-USAGE
Attributes:	communication-link-id (PK) (FK) organization-id (PK) (FK) organization-communication-link-rsn-cd (FK)
Entity:	ORGANIZATION-FUNCTION
Attributes:	functional-category-cd (PK) (FK) organization-id (PK) (FK)
Entity:	ORGANIZATION-IN-TRAINING-COURSE
Attributes:	organization-id (PK) (FK) training-course-id (PK) (FK) organization-training-role-cd (PK) (FK)
Entity:	ORGANIZATION-LOCATION
Attributes:	location-id (PK) (FK) organization-id (PK) (FK) organization-location-rsn-cd (PK) (FK)
Entity:	ORGANIZATION-LOCATION-REASON
Attributes:	organization-location-rsn-cd (PK) organization-location-rsn-desc (AK1)

Entity: ORGANIZATION-MATERIEL
 Attributes: materiel-catalog-item-id (PK) (FK)
 organization-id (PK) (FK)
 organization-materiel-type-cd (FK)
 org-mat-accountability-category-cd (FK)
 org-mat-acquisition-advice-cd (FK)
 operating-quantity-on-hand
 history-begin-date
 date-last-inventory
 non-wrm-quantity-in-excess
 wrm-quantity-in-excess
 special-project-quantity-on-hand
 risk-managed-indic
 org-mat-unit-price
 org-mat-unit-of-issue
 org-mat-medical-status-indic
 org-mat-shelf-life
 org-mat-unit-of-measure
 org-mat-dated-item-cd
 org-mat-nomenclature
 org-mat-unit-pack
 org-mat-susp-flag
 critical-item-indic

Entity: ORGANIZATION-MATERIEL-TYPE
 Attributes: organization-materiel-type-cd (PK)
 organization-materiel-type-desc (AK1)

Entity: ORGANIZATION-ORDER
 Attributes: order-id (PK) (FK)
 organization-id (PK) (FK)
 organization-order-role-cd (PK) (FK)

Entity: ORGANIZATION-ORDER-LINE
 Attributes: org-order-line-role-cd (PK) (FK)
 order-id (PK) (FK)
 order-line-id (PK) (FK)
 organization-id (PK) (FK)

Entity: ORGANIZATION-ORDER-LINE-ROLE
 Attributes: org-order-line-role-cd (PK)
 org-order-line-role-desc (AK1)

Entity: ORGANIZATION-ORDER-ROLE
 Attributes: organization-order-role-cd (PK)
 organization-order-role-name (AK1)

Entity:	ORGANIZATION-SERVICE
Attributes:	organization-id (PK) (FK) available-service-id (PK) (FK) organization-service-nomenclature
Entity:	ORGANIZATION-STRUCTURE
Attributes:	parent-organization-id (PK) (FK) child-organization-id (PK) (FK) organization-structure-rsn-cd (PK) (FK)
Entity:	ORGANIZATION-STRUCTURE-REASON
Attributes:	organization-structure-rsn-cd (PK) organization-structure-rsn-desc (AK1)
Entity:	ORGANIZATION-SUSPENSION-ROLE
Attributes:	organization-suspension-role-cd (PK) organization-suspension-role-desc (AK1)
Entity:	ORGANIZATION-TRAINING-ROLE
Attributes:	organization-training-role-cd (PK) organization-training-role-desc (AK1)
Entity:	ORGANIZATION-UNIT-ASSEMBLAGE-TYPE
Attributes:	materiel-catalog-item-id (PK) (FK) organization-id (PK) (FK) unit-assembly-version-cd (PK) (FK) organization-unit-assembly-on-hand organization-unit-assembly-quantity-required organization-unit-assembly-quantity-authorized
Entity:	PLUMBING-SYSTEM
Attributes:	facility-system-id (PK) (FK) plumbing-system-type-cd (FK)
Entity:	PLUMBING-SYSTEM-TYPE
Attributes:	plumbing-system-type-cd (PK) plumbing-system-type-desc (AK1)
Entity:	POSTAL-ZONE
Attributes:	location-id (PK) (FK) zip-code
Entity:	POWER-SOURCE
Attributes:	power-source-id (PK) power-source-type-cd (FK) voltage-phase-id (FK)
Entity:	POWER-SOURCE-TYPE
Attributes:	power-source-type-cd (PK) power-source-type-desc (AK1)

Entity:	PROGRAM
Attributes:	program-id (PK) program-type-cd/2 (FK) program-name
Entity:	PROGRAM-FUND-ACCOUNT
Attributes:	fund-account-id (PK) (FK) program-id (PK) (FK) program-fund-account-type-cd/2 (FK) program-authorized-funds program-committed-funds program-obligated-funds
Entity:	PROGRAM-FUND-ACCOUNT-TYPE
Attributes:	program-fund-account-type-cd/2 (PK) program-fund-account-type-desc (AK1)
Entity:	PROGRAM-ORGANIZATION
Attributes:	program-id (PK) (FK) organization-id (PK) (FK) program-organization-rsn-cd (PK) (FK)
Entity:	PROGRAM-ORGANIZATION-REASON
Attributes:	program-organization-rsn-cd (PK) program-organization-rsn-desc (AK1)
Entity:	PROGRAM-STRUCTURE
Attributes:	parent-program-id (PK) (FK) child-program-id (PK) (FK)
Entity:	PROGRAM-TYPE
Attributes:	program-type-cd/2 (PK) program-type-desc (AK1)
Entity:	PROJECT
Attributes:	program-id (PK) (FK) project-id (PK) project-type-cd project-name
Entity:	PROJECT-ORGANIZATION-ASSOC
Attributes:	program-id (PK) (FK) project-id (PK) (FK) organization-id (PK) (FK) project-organization-rsn-cd (PK) (FK)
Entity:	PROJECT-ORGANIZATION-REASON
Attributes:	project-organization-rsn-cd (PK) project-organization-rsn-desc (AK1)

Entity: PROJECT-STRUCTURE
Attributes: parent-project-structure-program-id (PK) (FK)
child-project-structure-program-id (PK) (FK)
parent-project-structure-project-id (PK) (FK)
child-project-structure-project-id (PK) (FK)

Entity: RECEIPT-OF-GOODS-AND-SERVICES
Attributes: receipt-suffix-cd (PK)
order-id (PK) (FK)
order-line-id (PK) (FK)
quantity-received
receipt-date
litigation-cd
acceptance-date

Entity: RISK-MANAGED-MATERIEL
Attributes: materiel-catalog-item-id (PK) (FK)
organization-id (PK) (FK)
materiel-device-risk-level-cd (FK)

Entity: ROOM
Attributes: facility-id (PK) (FK)
architectural-room-no
logical-room-no
floor-to-floor-height
floor-to-ceiling-height

Entity: ROOM-STRUCTURAL-COMPONENT
Attributes: room-structural-component-id (PK)
facility-id (PK) (FK)
room-structural-component-type-cd (FK)

Entity: ROOM-STRUCTURAL-COMPONENT-TYPE
Attributes: room-structural-component-type-cd (PK)
room-structural-component-type-desc (AK1)

Entity: SERVICE-CATEGORY
Attributes: service-category-cd (PK)
service-category-desc (AK1)

Entity: SERVICE-ORDER-LINE
Attributes: order-id (PK) (FK)
order-line-id (PK) (FK)
available-service-id (FK)
service-order-line-type-cd (FK)
service-order-completion-date
service-order-start-date

Entity: SERVICE-ORDER-LINE-TECHNICIAN
Attributes: order-id (PK) (FK)
employee-id (PK) (FK)
order-line-id (PK) (FK)
hours-expended

Entity: SERVICE-ORDER-LINE-TYPE
Attributes: service-order-line-type-cd (PK)
service-order-line-type-desc (AK1)

Entity: SERVICE-SCHEDULE-CATEGORY
Attributes: service-schedule-category-cd (PK)
service-schedule-category-desc (AK1)

Entity: SERVICE-STRUCTURE
Attributes: parent-available-service-id (PK) (FK)
child-available-service-id (PK) (FK)

Entity: SERVICE-TASK
Attributes: service-task-cd (PK)
service-task-desc (AK1)

Entity: SERVICE-TYPE
Attributes: service-type-cd (PK)
service-type-desc (AK1)

Entity: **SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM**
 Attributes: **mci-mfr-model-id/3 (PK) (FK)**
serial-no (PK) (FK)
singly-managed-materiel-type-cd (FK)
holding-organization-id (FK)
materiel-catalog-item-id (FK) (FK)
unit-assemblage-id (FK)
maintenance-organization-id (FK)
service-location-id (FK)
equipment-condition-status-cd (FK)
contract-no (FK)
singly-managed-materiel-priority-cd
index-no
tech-lit-indic
acquisition-date
date-in-service
warranty-expiration-date-parts
warranty-expiration-date-labor
acquisition-cost
salvage-dollar-value
maintenance-note-text
singly-managed-materiel-sched-svc-base-dt
singly-managed-equipment-condition-cd
normal-location-id (FK)
smei-life-expectancy-years
facility-system-indic

Entity: **SINGLY-MANAGED-MATERIEL-TYPE**
 Attributes: **singly-managed-materiel-type-cd (PK)**
singly-managed-materiel-type-desc (AK1)

Entity: **SINGLY-MANAGED-WORK-ORDER**
 Attributes: **order-id (PK) (FK)**
serial-no (FK)
mci-mfr-model-id/3 (FK)

Entity: **SOURCE-OF-SUPPLY**
 Attributes: **organization-id (PK) (FK)**
cage-cd
small-business-indic
8A-firm-indic
vendor-indic
manufacturer-indic
foreign-owned-indic

Entity: **STANDARDS-DOCUMENT**
 Attributes: **document-no (PK) (FK)**
standards-document-text

Entity:	STATE
Attributes:	location-id (PK) (FK) state-name
Entity:	STERILE-PACK
Attributes:	sterile-pack-id (PK) sterile-pack-type-cd (FK) location-id (FK) expiration-date
Entity:	STERILE-PACK-STRUCTURE
Attributes:	parent-sterile-pack-id (PK) (FK) child-sterile-pack-id (PK) (FK)
Entity:	STERILE-PACK-SUPPLY-MATERIEL
Attributes:	sterile-pack-id (PK) (FK) materiel-catalog-item-id (PK) (FK) organization-id (PK) (FK) sterile-pack-supply-quantity
Entity:	STERILE-PACK-TYPE
Attributes:	sterile-pack-type-cd (PK) sterile-pack-type-desc (AK1)
Entity:	STORAGE-AREA
Attributes:	functional-space-id (PK) (FK) storage-area-type-cd (FK)
Entity:	STORAGE-AREA-STRUCTURE
Attributes:	parent-functional-space-id (PK) (FK) child-functional-space-id (PK) (FK)
Entity:	STORAGE-AREA-TYPE
Attributes:	storage-area-type-cd (PK) storage-area-type-desc (AK1)
Entity:	STRUCTURAL-SYSTEM
Attributes:	facility-system-id (PK) (FK) structural-system-type-cd (FK)
Entity:	STRUCTURAL-SYSTEM-TYPE
Attributes:	structural-system-type-cd (PK) structural-system-type-desc (AK1)
Entity:	SUBSTITUTE-CATALOG-ITEM
Attributes:	primary-item.parent-materiel-catalog-item-id (PK) (FK) substitute-item.child-materiel-catalog-item-id (PK) (FK) sub/prime-ratio

Entity: **SUPERSTRUCTURE**
Attributes: **facility-system-id (PK) (FK)**
no-of-stories

Entity: **SUPPLY-MATERIEL**
Attributes: **materiel-catalog-item-id (PK) (FK)**
organization-id (PK) (FK)
safety-level-quantity
economic-order-quantity-level
requirement-cd
operating-suspended-quantity
unique-level-cd
dated-item-flag
inventory-freeze-flag
repair-parts-quantity-on-hand

Entity: **SUPPLY-RESTRICTION**
Attributes: **restriction-start-date (PK)**
supply-restriction-type-cd (PK) (FK)
organization-id (PK) (FK)
restriction-end-date\optional
supply-restriction-rsn-text

Entity: **SUPPLY-RESTRICTION-TYPE**
Attributes: **supply-restriction-type-cd (PK)**
supply-restriction-type-desc (AK1)

Entity: **SURFACE-CATEGORY**
Attributes: **surface-category-cd (PK)**
surface-category-desc (AK1)

Entity: **TABLE-OF-ALLOWANCE**
Attributes: **document-no (PK) (FK)**
table-of-allowance-no (AK1)

Entity: **TABLE-OF-ALLOWANCE--MATERIEL-REQUIREMENT**
Attributes: **materiel-catalog-item-id (PK) (FK)**
document-no (PK) (FK)
table-of-allowance-minimum-quantity-required

Entity: **TASK**
Attributes: **program-id (PK) (FK)**
project-id (PK) (FK)
task-id (PK)
task-name

Entity:	TASK-ORGANIZATION
Attributes:	program-id (PK) (FK) project-id (PK) (FK) task-id (PK) (FK) organization-id (PK) (FK) task-organization-rsn-cd (PK) (FK)
Entity:	TASK-ORGANIZATION-REASON
Attributes:	task-organization-rsn-cd (PK) task-organization-rsn-desc (AK1)
Entity:	TASK-STRUCTURE
Attributes:	parent-program-id/2 (PK) (FK) child-program-id/2 (PK) (FK) parent-project-id (PK) (FK) parent-task-id (PK) (FK) child-project-id (PK) (FK) child-task-id (PK) (FK)
Entity:	TIME-PERIOD
Attributes:	time-period-id (PK) time-period-category-id (FK) time-period-begin-date time-period-end-date
Entity:	TIME-PERIOD-CATEGORY
Attributes:	time-period-category-id (PK) time-period-category-desc (AK1)
Entity:	TRACKED-END-ITEM
Attributes:	materiel-catalog-item-id (PK) (FK) end-item-cd
Entity:	TRAINEE-IN-TRAINING-COURSE
Attributes:	training-course-id (PK) (FK) individual-id/2 (PK) (FK) individual-training-role-cd (PK) (FK) pass-fail-indic certification-indic
Entity:	TRAINING-COURSE
Attributes:	training-course-id (PK) training-delivery-method-cd (FK) available-service-id (FK) location-id (FK) training-start-date training-end-date total-training-hours training-remarks-text

Entity:	TRAINING-DELIVERY-METHOD
Attributes:	training-delivery-method-cd (PK) training-delivery-method-desc (AK1)
Entity:	TRAINING-DIFFICULTY-LEVEL
Attributes:	training-difficulty-level-cd (PK) training-difficulty-level-desc (AK1)
Entity:	UNDATED-SUPPLY-MATERIEL
Attributes:	materiel-catalog-item-id (PK) (FK) organization-id (PK) (FK)
Entity:	UNIT-ASSEMBLAGE
Attributes:	unit-assembly-id (PK) unit-assembly-version-cd (FK) organization-id (FK) materiel-catalog-item-id (FK)
Entity:	UNIT-ASSEMBLAGE-STRUCTURE
Attributes:	parent-unit-assembly-id (PK) (FK) child-unit-assembly-id (PK) (FK) unit-assembly-criticality-flag
Entity:	UNIT-ASSEMBLAGE-SUPPLY-MATERIEL
Attributes:	materiel-catalog-item-id (PK) (FK) organization-id (PK) (FK) unit-assembly-id (PK) (FK) unit-assembly-supply-materiel-quantity-on-hand unit-assembly-supply-materiel-quantity-required unit-assembly-supply-materiel-quantity-authorized
Entity:	UNIT-ASSEMBLAGE-TYPE
Attributes:	materiel-catalog-item-id (PK) (FK) unit-assembly-version-cd (PK) (FK) document-no (FK)
Entity:	UNIT-ASSEMBLAGE-TYPE-MATERIEL-REQUIREMENT
Attributes:	unit-assembly-materiel-catalog-item-id (PK) (FK) materiel-catalog-item-id (PK) (FK) unit-assembly-version-cd (PK) (FK) unit-assembly-minimum-quantity-required

Entity:	UNIT-ASSEMBLAGE-TYPE-STRUCTURE
Attributes:	parent-unit-assemblage-version-cd (PK) (FK) child-unit-assemblage-version-cd (PK) (FK) parent-materiel-catalog-item-id/2 (PK) (FK) child-materiel-catalog-item-id/2 (PK) (FK) unit-assemblage-type-unit-assemblage-qty
Entity:	UNIT-ASSEMBLAGE-VERSION
Attributes:	unit-assemblage-version-cd (PK) originating-fiscal-year (FK)
Entity:	UNIT-TYPE
Attributes:	unit-type-cd (PK) unit-type-desc (AK1)
Entity:	UTILITY-RECEPTACLE
Attributes:	utility-receptacle-id (PK) room-structural-component-id (FK) facility-id (FK) utility-receptacle-type-cd (FK)
Entity:	UTILITY-RECEPTACLE-TYPE
Attributes:	utility-receptacle-type-cd (PK) utility-receptacle-type-desc (AK1)
Entity:	VENDOR
Attributes:	organization-id (PK) (FK) minimum-order-dollar-value
Entity:	VENDOR-MANUFACTURER-ITEM
Attributes:	vendor-organization-id (PK) (FK) materiel-catalog-item-id (PK) (FK) manufacturer-organization-id (PK) (FK) vendor-item-cost-dollars vendor-manufacturer-item-nomenclature vendor-manufacturer-item-no
Entity:	VENDOR-MATERIEL-CATALOG-ITEM
Attributes:	materiel-catalog-item-id (PK) (FK) organization-id (PK) (FK) minimum-order-quantity maximum-order-quantity vendor-item-no vendor-item-nomenclature
Entity:	VOLTAGE-PHASE
Attributes:	voltage-phase-id (PK) voltage-phase-desc

Entity:	WALL
Attributes:	facility-id (PK) (FK) room-structural-component-id (PK) (FK) wall-location-designator
Entity:	WARRANTED-CONTRACTING-OFFICER
Attributes:	organization-id (PK) (FK) individual-id (PK) (FK) individual-organization-role-cd (PK) (FK) contracting-authorized-maximum-dollar-amount
Entity:	WIRE-TYPE
Attributes:	wire-type-cd (PK) wire-type-desc (AK1)
Entity:	WIRED-COMMUNICATION-INSTRUMENT
Attributes:	mci-mfr-model-id/3 (PK) (FK) serial-no (PK) (FK) utility-receptacle-id (FK)
Entity:	WIRED-COMMUNICATION-LINK
Attributes:	communication-link-id (PK) (FK)
Entity:	WIRELESS-COMMUNICATION-INSTRUMENT
Attributes:	mci-mfr-model-id/3 (PK) (FK) serial-no (PK) (FK)
Entity:	WIRELESS-COMMUNICATION-LINK
Attributes:	communication-link-id (PK) (FK)
Entity:	WIRELESS-COMMUNICATION-LINK-INSTRUMENT-ASSOC
Attributes:	communication-link-id (PK) (FK) mci-mfr-model-id/3 (PK) (FK) serial-no (PK) (FK)
Entity:	WORK-ORDER
Attributes:	order-id (PK) (FK) work-order-type-cd/2 (FK) order-receipt-date order-start-date originating-action-cd work-order-completion-date
Entity:	WORK-ORDER-TYPE
Attributes:	work-order-type-cd/2 (PK) work-order-type-desc (AK1)

Entity: WRM-PROG-MATERIEL
 Attributes: program-id (PK) (FK)
 materiel-catalog-item-id (PK) (FK)
 organization-id (PK) (FK)
 document-no (FK)
 wrm-auth-quantity
 wrm-on-hand-quantity
 wrm-due-in-quantity
 wrm-critical-item-cd
 wrm-deferred-procurement-cd
 wrm-authorization-dccument-no\optional
 wrm-suspended-quantity

Entity: WRM-PROGRAM
 Attributes: program-id (PK) (FK)
 wrm-program-type-cd (FK)
 organization-id (FK)
 location-id (FK)
 wrm-program-id (AK1)

Entity: WRM-PROGRAM-FUND-ACCOUNT
 Attributes: fund-account-id (PK) (FK)
 program-id (PK) (FK)
 wrm-sale-amount

Entity: WRM-PROGRAM-TYPE
 Attributes: wrm-program-type-cd (PK)
 wrm-program-type-desc (AK1)

Entity: WRM-SINGLY-MANAGED-EQUIPMENT-ITEM
 Attributes: mci-mfr-model-id/3 (PK) (FK)
 serial-no (PK) (FK)
 wrm-prog-materiel-id (FK)

4.4 Data Model Entity Definitions

ACCOUNTABILITY-CATEGORY

A type of accountability required for a type of materiel based on its durability and expendability.

ACQUISITION-ADVICE-CATEGORY

A classification of Materiel-Catalog-Items that indicates how and under what restrictions an item can be acquired (Defense Logistics Agency (DLA) Customer Assistance Handbook).

ADDRESS

A subtype of Location. A specific location or mailing address of an Individual, Organization, or property such as a street address or a post office box.

ASSIGNED-SINGLY-MANAGED-EQUIPMENT-ITEM

A subtype of Singly-Managed-Materiel-Equipment-Item that is assigned to a specific customer for use.

ASSIGNED-SINGLY-MANAGED-EQUIPMENT-ITEM-IN-STERILE-PACK

A subtype of Assigned-Singly-Managed-Equipment-Item that is currently being used in a Sterile-Pack.

AUTHORIZATION-DOCUMENT

A document authorizing materiel or services to a specific Organization based on a mission.

AUTHORIZATION-DOCUMENT-TYPE

A classification of Authorization-Documents such as Table-Of-Allowance.

AVAILABLE-SERVICE

A performance or delivery service that can be procured either within DoD or externally.

BED-TYPE

A particular kind of bed as defined by its specialized function.

BUILDING

A single physical edifice that supports one or more functions; consists of Rooms, Suites, Functional-Spaces, and Facility-Systems.

BUYER-VENDOR-CONSTRAINT

A statement of the terms and/or conditions between a vendor and a buying organization.

CAMPUS

A set of geographically co-located but unconnected Buildings or Facility-Complexes.

CERTIFICATION-TYPE

A classification of credentials awarded to attendees who have successfully completed an Instruction-Program.

CITY

A subtype of Location; a municipality with definite boundaries.

COMMUNICATION-CABLE-TYPE

A type of cable, as defined by its physical structure, used to carry communications data.

COMMUNICATION-INSTRUMENT

An apparatus that acts as a human interface to convey information, instructions, verbal messages, etc., between physical locations, when connected to a Communication-Link.

COMMUNICATION-INSTRUMENT-TYPE

A classification of Communication-Instrument.

COMMUNICATION-LINK

A channel of communication used to transmit voice or data. Includes telephone lines and radio frequencies.

COMMUNICATION-LINK-RECEPTACLE

The associative relationship between a specific Communication-Link and one of its related receptacles. For example, a wall-mounted telephone jack might carry several telephone lines (represented by telephone numbers), each being a separate Communication-Link.

COMMUNICATION-LINK-TYPE

A categorization of Communication-Links based on whether the link is wired or wireless.

COMMUNICATION-RECEPTACLE

A subtype of Utility-Receptacle that provides communication services to a Facility.

COMMUNICATION-RECEPTACLE-TYPE

A classification of Communication-Receptacles needed to interface between various cable types and Communication-Instruments.

CONTRACT

A legally binding agreement between the U.S. Government and a Source-Of-Supply for a specific service or item for a stated amount of money.

CONTRACT-INDIVIDUAL-ASSOC

The association of an Individual playing a particular Contract-Individual-Role with respect to a particular Contract.

CONTRACT-INDIVIDUAL-ROLE

A role that an Individual may have with respect to a Contract.

CONTRACT-TYPE

A classification of Contracts.

COST-CENTER

A grouping of Organizations for the purpose of aggregating costs.

COUNTRY

A subtype of Location that is a nation or state.

DATED-LOT

A subtype of Lot for which the date-of-manufacture is known.

DATED-SUPPLY-LOCATION

The location of supply items by Dated-Lot.

DATED-SUPPLY-MATERIEL

A subtype of Supply-Materiel having a definite potency period.

DBOF-FUND-ACCOUNT

A subtype Fund-Account whose source of funds is the Defense Business Operations Fund (DBOF).

DISBURSING-STATION

A subtype of DoD-Organization that has been granted authority to disburse Government funds.

DOCUMENT

A formalization of specifications, authorizations, codes, or standards.

DOD-ORGANIZATION

A subtype of Organization that is a part of the Department of Defense.

DRUG-CLASS

A classification of drug items according to the First Databank National Drug File.

DRUG-ITEM

A subtype of Medical-Materiel-Catalog-Item that has been classified by the Food and Drug Administration as being a drug item.

ELECTRICAL-CIRCUIT

An electron pathway that carries electrical current from an Electrical-Distribution-Panel to power, equipment, and lights.

ELECTRICAL-CIRCUIT-TYPE

A classification of Electrical-Circuits based on the criticality of attached equipment and lighting.

ELECTRICAL-DISTRIBUTION-PANEL

A dispersal point of electrical power feeding a number of Electrical-Circuits.

ELECTRICAL-DISTRIBUTION-SYSTEM

A subtype of Facility-System that supplies electrical power and distributes it to a Facility.

ELECTRICAL-DISTRIBUTION-UNIT

A subtype of Facility-System-Equipment-Item that performs electrical feed functions.

ELECTRICAL-DISTRIBUTION-UNIT-TYPE

A classification of Electrical-Distribution-Unit.

ELECTRICAL-SERVICE-TYPE

A classification of Electrical-Services.

EMPLOYEE

A subtype of Individual-Organization-Assoc that represents a particular Individual playing the role "Employee of" with respect to a particular Organization.

EQUIPMENT-AVAILABILITY-REASON

A reason that can be used to justify an Equipment-Availability-Type in an Equipment-System-Status or Equipment-Item-Status.

EQUIPMENT-AVAILABILITY-TYPE

A type of availability that can be used to describe an Equipment-System or Equipment-Item.

EQUIPMENT-CONDITION-STATUS

The state of operability of an Equipment-System or a Singly-Managed-Materiel-Equipment-Item.

EQUIPMENT-ITEM-STATUS

The availability of an Equipment-Item as of a particular date and time.

EQUIPMENT-MATERIEL

A subtype of Organization-Materiel where the Materiel-Catalog-Item is considered to be Equipment.

EQUIPMENT-MATERIEL-ASSIGNMENT

Assignment of responsibility for Equipment-Materiel to an authorized Organization.
Accountability for the materiel does not transition with the assignment.

EQUIPMENT-SYSTEM

A collection of Singly-Managed-Materiel-Equipment-Items that when utilized together perform a function.

EQUIPMENT-SYSTEM-ITEM

A Singly-Managed-Materiel-Equipment-Item that was installed as a component of an Equipment-System as of a particular date.

EQUIPMENT-SYSTEM-STATUS

The availability of an Equipment-System as of a particular date and time.

EQUIPMENT-SYSTEM-WORK-ORDER

A subtype of Work-Order that pertains to a specific Equipment-System.

FACILITY

A physical real property entity with the subtypes of Building, Suite, Structure, and Room.

FACILITY-BED-TYPE

A particular Bed-Type in a particular Facility.

FACILITY-COMPLEX

A collection of contiguous Facilities linked to each other by function, name, or association with an Organization.

FACILITY-COMPLEX-ON-CAMPUS

A subtype of Facility-Complex that is located on a Campus.

FACILITY-FUNCTIONAL-USE

A prescribed, organizationally related mission that is performed at a particular Facility.

FACILITY-IN-COMPLEX

A subtype of Facility that exists as a component of a Facility-Complex.

FACILITY-ON-CAMPUS

A subtype of Facility that exists as a component of a Campus.

FACILITY-ORGANIZATION

The association of a particular Organization with a particular Facility.

FACILITY-ORGANIZATION-REASON

A description of the relationship between an Organization and a Facility.

FACILITY-PROJECT

A subtype of Project for building or renovating a Facility.

FACILITY-PROJECT-FUNDING

An association between a Facility-Project and a Fund-Account. Provides data about the source of funding to accomplish a Facility-Project.

FACILITY-PROJECT-MILESTONE

A significant Project event that occurs at a discrete point in time.

FACILITY-PROJECT-SCOPE

Information that defines a Facility-Project in terms of its proposed size or cost.

FACILITY-PROJECT-SCOPE-TYPE

A classification of a Facility-Project-Scope (e.g., addition/alterations, replacement/BMAR).

FACILITY-SITE

A subtype of Location; may specify the physical location of a Facility or the location of a Functional-Space.

FACILITY-STANDARD

The association of a particular Facility with an Ideal-Facility-Document. The set of these associations for a given Facility defines the standards to which it adheres.

FACILITY-STRUCTURE

The relationship of one Facility to another.

FACILITY-SYSTEM

An aggregation of physical components for a given Facility, e.g., architectural, mechanical, electrical, communication, etc.

FACILITY-SYSTEM-CLASS

A classification of Facility-System.

FACILITY-SYSTEM-CLASS-STDS-DOC

A correlation of a Standards-Document with a Facility-System-Class to which it applies.

FACILITY-SYSTEM-CLASS-STRUCTURE

The relationship of one Facility-System-Class to another.

FACILITY-SYSTEM-EQUIPMENT-ITEM

A subtype of Singly-Managed-Materiel-Equipment-Item that is a component of a Facility-System.

FACILITY-SYSTEM-EQUIPMENT-ITEM

A subtype of Singly-Managed-Materiel-Equipment-Item that is a component of a Facility-System.

FACILITY-SYSTEM-EQUIPMENT-ITEM-TYPE

A particular type of Facility-System-Equipment-Item, e.g., HVAC-Unit, Electrical-Distribution-Unit, etc.

FACILITY-SYSTEM-FUNCTION

A function that a Facility-System may serve.

FACILITY-SYSTEM-PROJECT-WORK-ORDER

A subtype of Facility-System-Work-Order that initiates a Facility-Project.

FACILITY-SYSTEM-STRUCTURE

The relationship of one Facility-System to another.

FACILITY-SYSTEM-WORK-ORDER

A subtype of Work-Order that initiates maintenance, repair, modification, or replacement of a Facility-System.

FACILITY-SYSTEM-EQUIPMENT-ITEM

A subtype of Singly-Managed-Materiel-Equipment-Item that is a component of a Facility-System.

FEDERAL-MATERIEL-CATALOG-ITEM

A subtype of Materiel-Catalog-Item that has a stock number assigned by the Defense Logistics Agency (DLA).

FEDERAL-ORGANIZATION

A subtype of Organization that belongs to the U.S. Government.

FISCAL-YEAR

A subtype of Time-Period representing an accounting period of 12 months.

FOUNDATION

A subtype of Structural-System representing a below-ground-level construction that supports a Superstructure and transmits its weight to the earth.

FOUNDATION-TYPE

A classification of Foundation based on its environment and load-bearing requirements.

FUNCTIONAL-SPACE

An area contained in a Facility that is identified for a specific purpose, e.g., administration, inpatient, outpatient, and storage.

FUNCTIONAL-SPACE-TYPE

A classification of Functional-Spaces.

FUNCTIONAL-USE-CATEGORY

A type of function that may be assigned to a Facility-System, an Ideal-Facility, or an Organization.

FUND-ACCOUNT

A funding resource representing dollars of a single Fund-Type and a single Fund-Account-Class.

FUND-ACCOUNT-CLASS

A categorization of Fund-Accounts by congressional appropriation.

FUND-ACCOUNT-ORGANIZATION

The association between a Fund-Account and an Organization playing a particular Fund-Account-Organization-Role.

FUND-ACCOUNT-ORGANIZATION-ROLE

A type of relationship that might exist between a Fund-Account and an Organization,

FUND-ALLOCATION

The assignment of a portion of funds in a Fund-Account to an Object-Class.

FUND-TYPE

A classification of funding appropriation.

FUNDS-REQUEST

A request from one Organization to another for funding.

GENERIC-EQUIPMENT-CLASS

A classification of Materiel-Catalog-Items that possess the same functional capabilities.

GENERIC-EQUIPMENT-CLASS-INSTRUCTION-PROGRAM

A subtype of Instruction-Program that focuses on a specific Generic-Equipment-Class.

GENERIC-EQUIPMENT-ITEM

A subtype of Managed-Materiel-Item belonging to a particular Generic-Equipment-Class.

GEOLOCATION

A subtype of Location representing the physical, geographical location of an entity.

GROUP-MANAGED-EQUIPMENT

Those items of materiel, both medical and non-medical, that are not maintenance-significant for a particular Organization and that, therefore, are managed collectively.

GROUP-MANAGED-EQUIPMENT-LOCATION

The location assignment of a quantity of Group-Managed-Equipment.

GROUP-MANAGED-EQUIPMENT-WORK-ORDER

A subtype of Work-Order that pertains to a particular instance of Group-Managed-Equipment.

GROUP-MANAGED-UNDATED-MATERIEL-SUPPLY-LOCATION

A location of a specific quantity of supply items that do not have a potency expiration date.

HEALTH-DEVICE

A subtype of Managed-Materiel-Item, excluding drugs, that performs a particular medical function.

HEALTH-DEVICE-CLASS

A classification of Health-Devices by medical function.

HEALTH-DEVICE-CLASS-INSTRUCTION-PROGRAM

A subtype of Instruction-Program that focuses on a specific Health-Device-Class.

HEALTH-DEVICE-SERVICE-TASK

A Service-Task that must be performed in order to accomplish a type of Available-Service on a member of a particular Health-Device-Class.

HVAC-UNIT

A subtype of Facility-System-Equipment-Item that performs heating, ventilation, and/or air-conditioning functions.

HVAC-UNIT-TYPE

A classification of HVAC-Unit.

IDEAL-FACILITY

A concept of an idealized facility that, by definition, meets all current standards and codes for its Facility-Type.

IDEAL-FACILITY-DOCUMENT

The association between a Standards-Document and an Ideal-Facility. Represents one of the sets of standards.

IDEAL-FACILITY-EQUIPMENT

The association between an Ideal-Facility and a type of equipment (Materiel-Catalog-Item) that it contains.

IDEAL-FACILITY-FUNCTIONAL-USE

The association of an Ideal-Facility and a Functional-Use-Category that it might support.

IDEAL-FACILITY-STRUCTURE

The relationship of one Ideal-Facility to another.

IDEAL-FACILITY-SYSTEM

The association between an Ideal-Facility and a Facility-System-Class representing a type of Facility-System that it contains.

IDEAL-ROOM

A subtype of Ideal-Facility where facility-type-cd specifies Room.

IDEAL-ROOM-RECEPTACLE

A type of Utility-Receptacle mandated or recommended by appropriate criteria to be used in an Ideal-Room.

IDEAL-ROOM-SURFACE

A wall, floor, or ceiling in an Ideal-Room.

INDIVIDUAL

A human being of interest to the MHSS. This includes workers (military, civilian, contractor, volunteers); patients; beneficiaries; and representatives of suppliers, vendors, and manufacturers.

INDIVIDUAL-COMMUNICATION-LINK-REASON

A justification for the need to have a telephone or other communication link for an individual.

INDIVIDUAL-COMMUNICATION-LINK-USAGE

The association between an Individual and a Communication-Link.

INDIVIDUAL-IN-TRAINING-COURSE

An Individual involved in a particular Training-Course in a particular role.

INDIVIDUAL-INSTRUCTION-PROGRAM

The association between a particular Individual, acting in a particular role, and an Instruction-Program.

INDIVIDUAL-LOCATION

A place used or occupied by an Individual for a particular reason; can be an Address.

INDIVIDUAL-LOCATION-REASON

An explanation for the location of an individual.

INDIVIDUAL-ORGANIZATION-ASSOC

The association between an Individual, an Organization and an Individual-Organization-Role.

INDIVIDUAL-ORGANIZATION-ROLE

A type of relationship that may exist between an Individual and an Organization.

INDIVIDUAL-STRUCTURE

The association of an Individual with another Individual.

INDIVIDUAL-RECEIPT-ASSOC

The association of an Individual, a Receipt-of-Goods-and-Services, and the Individual's role with respect to the receipt.

INDIVIDUAL-RECEIPT-ROLE

The role an Individual may have with respect to a Receipt-of-Goods-and-Services.

INDIVIDUAL-SUSPENSION-ROLE

A role that an Individual might play with respect to a Materiel-Suspension.

INDIVIDUAL-TRAINING-ROLE

A role that an Individual might play in a Training-Course.

INSPECTION-TASK-TYPE

A specific type of task required to maintain the serviceability of supplies, e.g., check for discoloration.

INSTALLATION

A piece of real property used, owned, leased, or occupied by the Government that includes raw, improved, and semi-improved land.

INSTALLATION-STRUCTURE

The association of one Installation with another.

INSTRUCTION-PROGRAM

A subtype of Available-Service that is a course of study, e.g., On-the-Job-Training for x-ray calibration, inservice training on operator maintenance for defibrillators, operational training for pulse oximeter to correct operator error.

INSTRUCTION-PROGRAM-TYPE

A category of Instruction-Programs based on major subject focus.

LOCATION

A specific physical place or position that is used as a point of reference.

LOCATION-STRUCTURE

The association of one Location with another..

LOCATION-TYPE

A classification of Location, e.g., Address, State, Country.

LOT

A specific batch of a specific item as identified by the manufacturer.

LOT-MANAGED-UNDATED-SUPPLY-MATERIEL-LOCATION

The location of a quantity of supply items managed by manufacture lot number.

MAINTENANCE-CATEGORY-TYPE

A categorization of maintenance efforts that may be required by an Equipment-System.

MAINTENANCE-ORGANIZATION

A subtype of DoD-Organization; an organization that performs repair, calibration, safety inspection, and preventive maintenance (PM) on medical materiel.

MAINTENANCE-SIGNIFICANT-ITEM

A subtype of Singly-Managed-Materiel-Equipment-Item that requires scheduled/unscheduled service and history.

MANAGED-MATERIEL-ITEM

A subtype of Materiel-Catalog-Item that is stocked in a Logistics warehouse.

MANAGED-MATERIEL-REPORTING-REQUIREMENT

An association between an Organization and a Generic-Equipment-Item that must be reported because of specific authorizations or needs.

MANUFACTURED-ITEM

A specific item of materiel identified by its manufacturer, model number, and serial number.

MANUFACTURED-ITEM-SUSPENSION

The association between a Manufactured-Item and a Materiel-Catalog-Item-Manufacturer-Model-Suspension. Represents a specific serial numbered item that is cited on a model suspension.

MANUFACTURED-ITEM-WITH-OPTION

A Manufactured-Item that features a special option along with the basic model.

MANUFACTURER

A subtype of Source-Of-Supply; an Organization that makes items from raw materials and/or sub-assemblies.

MATERIEL-AUTHORIZATION-REQUEST

A request for authorization to acquire materiel.

MATERIEL-CATALOG-ITEM

An item in a catalog of materiel that is potentially available for acquisition, including ships, tanks, self-propelled weapons, aircraft, etc., and related spares, repair parts, and support equipment; but excluding real property, installations, and utilities necessary to equip, operate, maintain, and support military activities without distinction as to their application for administrative or combat purposes (JCS Publ-02 1989). Includes medical surgical supplies, drugs, medical equipment, food, and items required for the provision of health-care-medical-related items.

MATERIEL-CATALOG-ITEM-MANUFACTURER

An association between a Materiel-Catalog-Item and a Manufacturer of that item.

MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL

A catalog occurrence for a model provided by a particular Manufacturer.

MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-INSTRUCTION-PROGRAM

An Instruction-Program whose subject is a particular Materiel-Catalog-Item-Manufacturer-Model.

MATERIEL-CATALOG-ITEM-MANUFACTURER-LOT-SUSPENSION

A subtype of Materiel-Suspension that covers all materiel in a specific Lot.

MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-OPTION

A catalog occurrence for a Manufacturer's model that contains an extra-cost option.

MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-SUSPENSION

A subtype of Materiel-Suspension that covers materiel in a specific Materiel-Catalog-Item-Model. The scope of suspended materiel may be constrained by associating this suspension with a Manufactured-Item-Suspension and/or a Model-Option-Suspension.

MATERIEL-CATALOG-ITEM-MANUFACTURER-PART

A subtype of Materiel-Catalog-Item-Manufacturer that is a spare part.

MATERIEL-CATALOG-ITEM-MANUFACTURER-SUSPENSION

A subtype of Materiel-Suspension for a Materiel-Catalog-Item produced by a particular manufacturer.

MATERIEL-DEVICE-RISK-LEVEL

A level of patient and/or operator risk inherent with the usage of Risk-Managed-Materiel.

MATERIEL-FUNCTION-TYPE

A classification of use of a materiel item.

MATERIEL-INSPECTION-TASK

The association of an Inspection-Task-Type with a specific Materiel-Catalog-Item. The set of tasks for an item specifies how it must be inspected to maintain freshness and usability.

MATERIEL-ORDER-LINE

A subtype of Order-Line that specifies a type of materiel.

MATERIEL-ORDER-LINE-BY-MANUFACTURER

A Materiel-Order-Line that specifies a Manufacturer.

MATERIEL-ORDER-LINE-BY-MODEL

A subtype Materiel-Order-Line that specifies a Manufacturer and Model.

MATERIEL-ORDER-LINE-BY-OPTION

A subtype Materiel-Order-Line that specifies a Manufacturer, Model, and Option.

MATERIEL-ORDER-LINE-TYPE

A classification of Materiel-Order-Lines according to their specificity. The generic Materiel-Order-Line specifies only a Materiel-Catalog-Item. In addition, a Materiel-Order-Line may specify Manufacturer, Manufacturer and Model, or Manufacturer and Model and Option.

MATERIEL-RECEIPT-DISCREPANCY-ACTION

The disposition the receiving organization is requesting for discrepant materiel received.

MATERIEL-RECEIPT-DISCREPANCY-ACTION-TYPE

One of the disposition actions a receiving organization could request for discrepant materiel received.

MATERIEL-RECEIPT-DISCREPANCY-TYPE

A reason received materiel might not be accepted.

MATERIEL-RECEIPT-DISCREPANCY

An association between a Receipt-of-Goods-and-Services and a Materiel-Receipt-Discrepancy-Type that represents a physical variance between materiel ordered and materiel received.

MATERIEL-RECEIPT-WITH-DISCREPANCIES

Received shipment of materiel that does not meet the requirement of the contract.

MATERIEL-STRUCTURE

The association of one instance of Materiel-Catalog-Item with another.

MATERIEL-STRUCTURE-REASON

The specific explanation for a given materiel to materiel association (e.g., substitution of items).

MATERIEL-SUSPENSION

The suspension (by some authority such as FDA, DPSC) of some category of materiel. A suspension is announced by one or more Materiel-Suspension-Notices, each of which specifies the action required by its recipients.

MATERIEL-SUSPENSION-ACTION

An action required to suspend materiel from issue or use.

MATERIEL-SUSPENSION-ACTION-TYPE

One of the types of actions that may be required when an item is suspended.

MATERIEL-SUSPENSION-BY-MANUFACTURE-DATE

A subtype of Materiel-Suspension that specifies a range of dates of manufacture for which the suspension is effective.

MATERIEL-SUSPENSION-INDIVIDUAL-ASSOC

The association between an Individual and a particular Materiel-Suspension.

MATERIEL-SUSPENSION-CATEGORY

A type of Materiel-Suspension that specifies the scope of the suspension with respect to a Materiel-Catalog-Item.

MATERIEL-SUSPENSION-INDIVIDUAL-NOTICE

Notification sent to an Individual pertaining to a Materiel-Suspension.

MMATERIEL-SUSPENSION-NOTICE

Documentation from an official source (FDA, EPA, AFMLO, USAMMA, NMFO, DPSC, etc.) that lists materiel suspected of or proven to be defective and declared not issuable pending further investigation.

MATERIEL-SUSPENSION-NOTICE-TYPE

A category of Materiel-Suspension-Notice depending on whether it is addressed to an Organization or an Individual.

MATERIEL-SUSPENSION-ORGANIZATION

An Organization associated with the suspension of a materiel item.

MATERIEL-SUSPENSION-ORGANIZATION-ASSOC

The association between a Materiel-Suspension and an Organization playing a particular role with respect to it.

MATERIEL-SUSPENSION-ORGANIZATION-NOTICE

Notification sent to an Organization pertaining to a Materiel-Suspension.

MATERIEL-SUSPENSION-ORGANIZATION-ROLE

A role that an Organization might play with respect to a Materiel-Suspension.

MATERIEL-SUSPENSION-STRUCTURE

The association of two instances of Materiel-Suspension.

MATERIEL-SUSPENSION-TYPE

A classification of Materiel-Suspension with respect to the severity of the problem (e.g., whether or not it may cause fatalities).

MCI-MFR-MODEL-SUPPORT-ITEM

An association between a Materiel-Catalog-Item-Manufacturer-Model and a catalog item that supports it; typically represents a consumable item (e.g., paper) used by a type of equipment (e.g., an Electrocardiogram (EKG) machine).

MCI-MFR-MODEL-SUPPORT-ITEM-RSN

A reason that a catalog item might support a Materiel-Catalog-Item-Manufacturer-Model.

MECHANICAL-SYSTEM

A subtype of Facility-System. A combination of heating, air conditioning, ventilation, and plumbing components that contribute to controlling environmental conditions.

MECHANICAL-SYSTEM-TYPE

A classification of Mechanical-Systems based on function (e.g., plumbing).

MEDICAL-GAS-OUTLET

A subtype of Utility-Receptacle. A fixed supply, at the user level, for medical gasses.

MEDICAL-GAS-SYSTEM

A subtype of Plumbing-System devoted to the distribution of medical gases. A piping configuration with alarm monitoring and outlets at multiple locations.

MEDICAL-GAS-TYPE

A categorization of a Medical-Gas-System according to the type of gas that it provides.

MEDICAL-MATERIEL-CATALOG-ITEM

A subtype of Materiel-Catalog-Item whose function is in the medical treatment facility.

MEDICAL-MATERIEL-CATALOG-ITEM-TYPE

A categorization of a Medical-Materiel-Catalog-Item indicating its usage.

MEDICAL-SURGICAL-ITEM

A subtype of Medical-Materiel-Catalog-Item having its use in the medical surgical area of the medical treatment facility.

MILESTONE-TYPE

A classification of project milestone indicating its significance.

MOBILITY-CATEGORY

The classification of Facility indicating the degree to which it is intended to be moved.

MODEL-OPTION-SUSPENSION

The association between a Materiel-Catalog-Item-Manufacturer-Option and a Materiel-Catalog-Item-Manufacturer-Model-Suspension; signifies that the option is included in the model's scope of suspension.

NON-DBOF-FUND-ACCOUNT

Fund-Account that is funded by a Fund-Type other than DBOF.

OBJECT-CLASS

A DoD classification of expenditures (either planned or actual) according to the nature of the goods or services procured.

OCCUPANCY-TYPE

The classification of Facility based on the legal means by which it is occupied.

ORDER

A request for the procurement of goods and/or services, for authorization for goods and/or services, or for turning in materiel.

ORDER-INDIVIDUAL

An Individual playing a particular Order-Individual-Role with respect to an Order.

ORDER-INDIVIDUAL-ROLE

The role an Individual may play when dealing with an Order.

ORDER-LINE

A line-item on an Order; shows what is being ordered (materiel or service) along with all supporting data.

ORDER-LINE-FUND-ACCOUNT

The association between a particular Order-Line and a particular Fund-Account. Specifies one source of funds (out of several possible) for the Order-Line.

ORDER-LINE-STRUCTURE

The relationship between one instance of an Order-Line and another.

ORDER-LINE-TYPE

A classification of Order-Line indicating its focus on either materiel or services.

ORDER-STRUCTURE

The association between one instance of an Order and another.

ORDER-TYPE

A classification of Order based on its purpose.

ORGANIZATION

An administrative or functional business structure or body of persons established for a particular purpose (JCS Pub 1).

ORGANIZATION-CATEGORY

A classification of Organization that indicates whether it is Federal or non Federal.

ORGANIZATION-COMMUNICATION-LINK-REASON

One of a set of rationales for organizations to use communication links.

ORGANIZATION-COMMUNICATION-LINK-USAGE

The association between an Organization and a Communication-Link that it uses.

ORGANIZATION-FUNCTION

The association between an Organization and a Functional-Use-Category; may indicate organizational mission and/or capability.

ORGANIZATION-IN-TRAINING-COURSE

An association between an Organization (playing a particular role) and a Training-Course.

ORGANIZATION-LOCATION

An association between an Organization and a Location for a particular reason.

ORGANIZATION-LOCATION-REASON

A possible reason for an Organization to be associated with a Location.

ORGANIZATION-MATERIEL

The association between an Organization and a Materiel-Catalog-Item, for some quantity of which the Organization is accountable.

ORGANIZATION-MATERIEL-TYPE

A classification of Organization-Materiel according to its type of accountability.

ORGANIZATION-ORDER

The association between an Organization, an Order, and an Organization-Order-Role.

ORGANIZATION-ORDER-LINE

The association between an Organization, an Order-Line, and an Organization-Order-Line-Role.

ORGANIZATION-ORDER-LINE-ROLE

A role that an Organization may play with respect to an Order-Line.

ORGANIZATION-ORDER-ROLE

A role that an Organization may play with respect to an Order.

ORGANIZATION-SERVICE

An Available-Service offered by a particular Organization.

ORGANIZATION-STRUCTURE

The association between one Organization and another for a particular reason; supports multi-level organization hierarchy and grouping mission.

ORGANIZATION-STRUCTURE-REASON

Rationale or justification for the associations between Organizations.

ORGANIZATION-SUSPENSION-ROLE

A role that an Organization might play with respect to a Materiel-Suspension.

ORGANIZATION-TRAINING-ROLE

A role that an Organization might play with regard to a Training-Course.

ORGANIZATION-UNIT-ASSEMBLAGE-TYPE

The association between an Organization and a Unit-Assemblage-Type, for some quantity of which an Organization is accountable.

PLUMBING-SYSTEM

A compilation of piping systems that supplies and removes water, waste, sewage, and gases to sustain an operational Facility.

PLUMBING-SYSTEM-TYPE

A classification of Plumbing-Systems based on the substance being piped in or out.

POSTAL-ZONE

A geographic area identified for the purpose of delivering mail.

POWER-SOURCE

The source of power feeding Electrical-Distribution-Panels in a Facility; may be a commercial generation plant or a local generator.

POWER-SOURCE-TYPE

The classification of Power-Source according to whether it is internal or external.

PROGRAM

A broad-scale effort planned to provide logistics support to accomplish an assigned mission. May include deployable hospitals, fixed contingency hospitals, or hospital expansion. May contain Projects.

PROGRAM-FUND-ACCOUNT-TYPE

A classification of a Program-Fund-Account by the type of Program supported.

PROGRAM-FUND-ACCOUNT

The association of a Program with a Fund-Account that supports it.

PROGRAM-ORGANIZATION

The association of a Program, an Organization, and a Program-Organization-Reason.

PROGRAM-ORGANIZATION-REASON

A reason for a Program to be associated with an Organization.

PROGRAM-STRUCTURE

The association of one Program with another.

PROGRAM-TYPE

A classification of Program based on its purpose.

PROJECT

A planned undertaking of something to be accomplished, produced, or constructed, having a finite beginning and ending. Belongs to a Program and may contain Tasks.

PROJECT-ORGANIZATION-ASSOC

The association between a Project, an Organization, and a Project-Organization-Reason.

PROJECT-ORGANIZATION-REASON

A justification for associating a Project and an Organization.

PROJECT-STRUCTURE

The association of one Project with another.

RECEIPT-OF-GOODS-AND-SERVICES

Represents the receipt (and possible acceptance) of materiel or services ordered by an Organization.

RISK-MANAGED-MATERIEL

A subtype of Organization Materiel for which potential risk must be considered in scheduling preventive maintenance.

ROOM

A subtype of Facility. A discrete physical entity within a building that occupies physical space. May be part of a Suite.

ROOM-STRUCTURAL-COMPONENT

An architectural item (e.g., wall, floor, ceiling) that serves as a structural component of a Room.

ROOM-STRUCTURAL-COMPONENT-TYPE

A classification of Room-Structural-Component (e.g., walls, ceiling, floor, finishes).

SERVICE-CATEGORY

A categorization of Available-Service with respect to its mode of execution. Services are procured either as performance services or delivery services, where the latter has a defined deliverable.

SERVICE-ORDER-LINE

An Order-Line for procuring an Available-Service.

SERVICE-ORDER-LINE-TECHNICIAN

A maintenance technician who worked on a particular Service-Order-Line.

SERVICE-SCHEDULE-CATEGORY

The classification of Available-Service with respect to the two possible types of maintenance provided: scheduled or unscheduled.

SERVICE-STRUCTURE

The association of one instance of Available-Service with another.

SERVICE-TASK

A step that must be performed in order to complete an Available-Service.

SERVICE-TYPE

A classification of Available-Service that can be procured.

SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM

A subtype of Manufactured-Item. A specific item of organization equipment that is managed individually.

SINGLY-MANAGED-WORK-ORDER

A subtype of Work-Order that specifies a particular Singly-Managed-Materiel-Equipment-Item.

SOURCE-OF-SUPPLY

A subtype of Organization that can be either a Manufacturer or a Vendor.

STANDARDS-DOCUMENT

A subtype of Document containing generally acknowledged and published industrial measures or criteria used in comparing qualitative or quantitative values.

STATE

A subtype of Location; an autonomous territorial entity and/or political unit composing a federation under a sovereign government.

STERILE-PACK

A collection of Materiel-Catalog-Items that are packed in sterile form to be used for a particular procedure.

STERILE-PACK-STRUCTURE

Relates one instance of a Sterile-Pack to another; supports the case where one Sterile-Pack contains other Sterile-Packs.

STERILE-PACK-SUPPLY-MATERIEL

Supply materiel items that are included in a Sterile-Pack.

STERILE-PACK-TYPE

A classification of Sterile-Packs with respect to their use within a medical treatment facility.

STORAGE-AREA

A subtype of Functional-Space that is designated for storing materiel.

STORAGE-AREA-STRUCTURE

The association of one Storage-Area with another. Supports the hierarchy of storage locations, e.g., a bin is in a drawer that is in a cabinet that is located on a shelf; since each Storage-Area is contained in one Facility (which can be related to other Facilities via Facility-Structure), the shelf can be more precise, located in a particular Room in a particular warehouse.

STORAGE-AREA-TYPE

A classification of Storage-Area.

STRUCTURAL-SYSTEM

A subtype of Facility-System; can be a Foundation or a Superstructure that will support a self-contained single or multi-story Facility.

STRUCTURAL-SYSTEM-TYPE

A classification of Structural-Systems based on their location with respect to ground level.

SUBSTITUTE-CATALOG-ITEM

A subtype of Materiel-Structure representing an item that may be used in place of another catalog item.

SUPERSTRUCTURE

A subtype of Structural-System. The portion of a Facility that extends above the ground or grade level, normally sits on a Foundation.

SUPPLY-MATERIEL

The association between an Organization and a Materiel-Catalog-Item (considered by the Organization to be a supply) for a quantity of which the Organization is accountable.

SUPPLY-RESTRICTION

A constraint imposed on the usage of a particular Source-of-Supply as an available procurement source as of a particular date. Restriction may be imposed either by the Government or by the Source-of-Supply.

SUPPLY-RESTRICTION-TYPE

A categorization of supply restrictions.

SURFACE-CATEGORY

Classification of types of room surfaces.

TABLE-OF-ALLOWANCE

A subtype of Authorization-Document outlining materiel authorizations for an Organization.

TABLE-OF-ALLOWANCE-MATERIEL-REQUIREMENT

A Materiel-Catalog-Item required by a Table-Of-Allowance.

TASK

A discrete piece of work performed as part of a project.

TASK-ORGANIZATION

The association between an Organization, a Task, and a Task-Organization-Reason.

TASK-ORGANIZATION-REASON

The justification for associating a Task with a particular Organization.

TASK-STRUCTURE

The association between two Tasks.

TIME-PERIOD

A measurable period of time delineated by a beginning and an ending date.

TIME-PERIOD-CATEGORY

A classification of a Time-Period.

TRACKED-END-ITEM

A subtype of Materiel-Catalog-Item representing a type of equipment for which repair parts usage is captured (through the use of an End Item Code (EIC)).

TRAINEE-IN-TRAINING-COURSE

A subtype of Individual-in-Training-Course where the role is Trainee.

TRAINING-COURSE

The delivery of an Instruction-Program over a specific period of time to increase an Individual's knowledge and job proficiency.

TRAINING-DIFFICULTY-LEVEL

The degree of difficulty associated with an Instruction-Program.

UNDATED-SUPPLY-MATERIEL

A subtype of Supply-Materiel that is not labeled with its expiration date; however, its shelf life may be derived from date of manufacture and the shelf life code listed in the materiel catalog.

UNIT-ASSEMBLAGE

A collection of Materiel-Catalog-Items that have been assigned to an Organization to accomplish an assigned mission.

UNIT-ASSEMBLAGE-STRUCTURE

The association between instances of Unit-Assemblage.

UNIT-ASSEMBLAGE-SUPPLY-MATERIEL

Supply-Materiel used by a particular Unit-Assemblage.

UNIT-ASSEMBLAGE-TYPE

A classification of Unit-Assemblage as determined by its catalog definition plus its version.

UNIT-ASSEMBLAGE-TYPE-MATERIEL-REQUIREMENT

A Materiel-Catalog-Item required for a Unit-Assemblage-Type.

UNIT-ASSEMBLAGE-TYPE-STRUCTURE

The association between one occurrence of a Unit-Assemblage-Type and another.

UNIT-ASSEMBLAGE-VERSION

A particular version of a Unit-Assemblage; represents the version of the database that contains Unit-Assemblage specifications.

UNIT-TYPE

A classification of Organization based on mission.

UTILITY-RECEPTACLE

Terminus of utility services in a room or other facility. May support communications, electricity, or medical gases.

UTILITY-RECEPTACLE-TYPE

A classification of Utility-Receptacles according to purpose.

VENDOR

A subtype of Source-Of-Supply. A business entity that sells goods and services to the Government. The entity can be a Manufacturer or Vendor.

VENDOR-MANUFACTURER-ITEM

A Materiel-Catalog-Item made by a particular Manufacturer and sold by a Vendor.

VENDOR-MATERIEL-CATALOG-ITEM

A Materiel-Catalog-Item sold by a particular Vendor.

VOLTAGE-PHASE

A classification of electrical potential in relation to time.

WALL

A subtype of Room-Structural-Component used to internally subdivide a Building into Suites or Rooms.

WARRANTED-CONTRACTING-OFFICER

A subtype of Individual-Organization-Association. An individual authorized to enter into, administer, or terminate contracts and make related determinations and findings. The contracting officer receives from the appointing authority clear instructions (Warrant) in writing regarding limits of authority (Federal Acquisition Regulations (FAR) 1.602-1).

WIRE-TYPE

A classification of wire based on size, composition, and usage.

WIRED-COMMUNICATION-INSTRUMENT

A subtype of Communication-Instrument that depends upon connection by wire or cable to other external components or instruments for proper operation.

WIRED-COMMUNICATION-LINK

A subtype of Communication-Link that is established through wired building or facility system including data, voice, LAN, nurse-call, and network.

WIRELESS-COMMUNICATION-INSTRUMENT

A subtype of Communication-Instrument that does not require a wired connection to operate.

WIRELESS-COMMUNICATION-LINK

A subtype of Communication-Link that is established or provided by radio, microwave, satellite, cellular, or other non-wired mechanism.

WIRELESS-COMMUNICATION-LINK-INSTRUMENT-ASSOCIATION

The association of a Wireless-Communication-Instrument with a Wireless-Communication-Link.

WORK-ORDER

A subtype of an Order for service on materiel.

WORK-ORDER-TYPE

A categorization of Work-Order based on its purpose.

WRM-PROG-MATERIEL

Organization-Materiel reserved for a particular WRM-Program.

WRM-PROGRAM

A subtype of Program. A contingency mission for which stock is maintained.

WRM-PROGRAM-FUND-ACCOUNT

A category of funds with the specific purpose of procuring war reserve materiel.

WRM-PROGRAM-TYPE

A classification of WRM-Program; defines the purpose for contingency materiel.

WRM-SINGLY-MANAGED-EQUIPMENT-ITEM

A subtype of Singly-Managed-Materiel-Equipment-Item assigned to a specific war-ready materiel program.

4.5 Data Model Attribute Definitions

8a-firm-indic

Indicates whether or not a Source-Of-Supply is classified by Small Business Administration (SBA) as a minority owned (8a) small business. Valid values: Yes, No.

acceptance-date

The date on which a Receipt-Of-Goods-And-Services is accepted. Indicates that all materials or services ordered are complete and satisfy contract requirements.

accountability-category-cd

The unique identifier for the entity Accountability-Category. Valid values: N, D, X.

accountability-category-desc

The text description of the Accountability-Category:

<u>type-cd</u>	<u>type-desc</u>
N	non-expendable
D	durable
X	expendable.

acquisition-advice-cd

A unique identifier for Acquisition-Advice-Category. A one-character alpha field that indicates how and under what restrictions an item will be acquired. Valid values: D, F, H, K, L, Q, T, V

acquisition-advice-desc

A text description of the Acquisition-Advice-Category:

<u>type-cd</u>	<u>type-desc</u>
D	DoD integrated materiel-manager stocked and issued
F	fabricate or assemble non-stocked items
H	direct delivery under a central contract non-stocked item
K	centrally stocked for overseas only
L	local purchases non-stocked item
Q	bulk petroleum products - DLA-managed
T	condemned non-stocked item
V	terminal item.

acquisition-cost

The cost of a Singly-Managed-Materiel-Equipment-Item at the time of acquisition.

acquisition-date

The date a Singly-Managed-Materiel-Equipment-Item was procured.

action-cd

The action to be taken in the event of a discrepancy in shipment.

actual-cost

The total cost incurred for a Facility-Project to include Government supervision and overhead.

address-text

A clear text statement of an Address.

advice-cd

A two-character alphanumeric code provided to the supply source on the management of an Order-Line when a narrative is not feasible. Used for MILSTRIP transaction.

amount-received-dollars

The amount of funds received as a result of a Funds-Request.

amount-requested-dollars

The amount of funds requested on a Funds-Request.

architectural-room-no

Identifies a Room during the design and construction process.

authorization-document-type-cd

A unique identifier for Authorization-Document-Type.

authorization-document-type-desc

A text description of Authorization-Document-Type, e.g.:
Table-Of-Allowance.

authorization-request-indic

A binary indicator in a Materiel-Order-Line specifying whether or not the Order-Line is a request for authorization (rather than for goods and services). Valid values: Yes, No.

authorized-fund-amount

The dollar amount of funds that have been approved for use.

authorized-organization-id

The identifier of the Organization for which the equipment authorization was approved.

available-service-id

A unique identifier for an Available-Service.

bed-type-cd

Unique identifier for a Bed-Type.

bed-type-desc

The description for a Bed-Type, e.g.:
operating bed
bassinet
expanded bed
labor and delivery
intensive care.

building-no

Identifies a unique Building on an Installation.

cage-cd

An identifier that is assigned by the DLA to uniquely identify vendors, manufacturers, and other Government agencies.

calibration-cycle-mos

Prescribed time period between scheduled calibration or verification of calibration of equipment or device.

call-no/optional

An identifier of an Order-Line placed against an existing contract or delivery order. Together with contract-no or delivery-order-no, identifies an Order-Line uniquely.

campus-id

A unique identifier for a Campus.

campus-name

The common term of reference for a particular Campus, e.g.: National Naval Medical Center, Bethesda.

certification-indic

A binary indicator specifying whether or not a trainee was certified as a result of attending a Training-Course. Valid values: Yes, No.

certification-type-cd

A unique identifier for a Certification-Type.

certification-type-desc

A text description for a Certification-Type, e.g.:
certified electrician
certified CT operator
maintenance technician.

circuit-voltage

Amount of voltage (e.g., 120VAC, 240, 408) that a circuit has.

city-name

The name of a City.

communication-cable-type-cd

A unique identifier for a Communication-Cable-Type.

communication-cable-type-desc

A text description of a Communication-Cable-Type, e.g.:
twisted pair
coaxial
fiber optic.

communication-instrument-type-cd

The unique identifier of a Communication-Instrument-Type.

communication-instrument-type-desc

A text description of a particular type of communication instrument, e.g.:

telephone
fax machine
pager
hand-held radio.

communication-link-id

A unique identifier for a Communication-Link.

communication-link-type-cd

The unique identifier of a Communication-Link.

communication-link-type-desc

A text description of a type of a Communication-Link, e.g.:

wired
wireless.

communication-receptacle-type-cd

Uniquely identifies a Communication-Receptacle-Type.

communication-receptacle-type-desc

A text description of a Communication-Receptacle-Type, e.g.:

JP11
JP64.

completion-date

The date a Work-Order is completed.

component-service-end-date

The date a component is removed from an Equipment-System.

component-service-start-date

The date a component is placed in an Equipment-System.

contract-individual-role-cd

A unique identifier of a Contract-Individual-Role.

contract-individual-role-desc

The text description of a Contract-Individual-Role. Valid values include: originating customer, fund certifier (OMA, OPD), procuring contract officer, fund certifier (stock-fund), administrative contracting officer, contracting officer technical representative, receiver, and inspector.

contract-no

A unique identifier for a Contract.

contract-start-date

The date a Contract takes effect.

contract-time-period

The length of a Contract.

contract-type-cd

A unique identifier for a Contract Type.

contract-type-desc

A text description of a Contract-Type, e.g.:

fixed-price

cost-reimbursement

indefinite-delivery

time and materials

labor-hour

letter.

contracting-authorized-maximum-dollar-amount.

The maximum dollar amount the Warranted-Contracting-Officer is authorized to obligate per order.

cost-center-cd

A unique identifier of a Cost-Center.

cost-center-name

A common term of reference for a Cost-Center.

country-name

Country name.

critical-item-cd

Identifies equipment items that are mission-essential to the Organization. Values for this code are A and P. A is for items identified as ERC A units on the unit's table of organization and Equipment. P is the code for items identified as Pacing items on the unit's table of organization and equipment.

critical-item-indic

A binary indicator specifying whether or not a Unit-Assemblage is critical to the mission of the Unit-Assemblage that contains it. Valid values: Yes, No.

cumulative-investment-ratio

The percentage of the acquisition cost that may be expensed against a maintenance-significant item during its life.

current-plant-replacement-value

The current dollar replacement value for an item.

daily-dollar-value-maximum-per-item

The maximum dollar amount that may be ordered against a supply materiel item in a given day from a given vendor.

daily-dollar-value-maximum-total

The maximum dollar amount that may be ordered against all supply materiel items in a given day from a given vendor.

date-expected-delivery

The date that items on an Order-Line are expected to be delivered.

date-funds-received

The date on which requested funds were received.

date-funds-requested

The date on which a fund account request is submitted.

date-in-service

The date an equipment materiel item was placed in use by the maintenance organization.

dated-item-flag

Identifies whether or not a Supply-Materiel-Item has an expiration date.

date-last-inventory

A record of the last time an Organizational-Materiel was formally inventoried so that the next inventory cycle can be accurately calculated.

dated-lot-expiration-date

Identifies the expiration date of the Dated-Lot of a Materiel-Catalog-Item.

dated-lot-manufacture-date

Identifies the manufacture date of the Dated-Lot of a Materiel-Catalog-Item.

dated-supply-location-operating-quantity

Identifies the quantity of dated operating supplies in a particular Location.

dated-supply-location-suspended-quantity

Identifies the quantity of dated suspended supplies in a particular Location.

dated-supply-materiel-extended-item-flag

Identifies dated WRM-Supply-Materiel that is undergoing testing by the FDA for the purpose of extending an item's expiration date.

delivery-order-no/option

A unique identifier of an Order placed against an existing Contract.

demand-cd

A code in an Order-Line that signifies whether the demand for the item is recurring or non-recurring. Valid values: R, N, P, O, and S.

destruction-flag

Identifies whether or not a particular Lot of an item is to be destroyed. Valid values: Yes, No.

disbursing-station-id

A unique identifier for a Disbursing-Station.

disbursing-station-indic

A binary indicator specifying whether or not a DoD-Organization is a Disbursing-Station.
Valid values: Yes, No.

document-id-cd

A code that identifies a specific Order-Line to its intended purpose or usage.

document-no

A unique identifier for a specific Document.

document-type-cd

A discriminator between types of documents, e.g.:
Authorization-Document
Standards-Document.

dod-project-no

Identifier in the Order-Line for a DoD project.

drug-class-cd

A unique identifier for a Drug-Class.

drug-class-name

The unique name of a Drug-Class.

economic-order-quantity-level

The quantity of a supply item required during an economic period that is a part of the stock control level.

electrical-circuit-id

The unique identifier of an Electrical-Circuit.

electrical-circuit-nomenclature

The term of reference for an Electrical-Circuit used by the electrician to identify specific circuits.

electrical-circuit-type-cd

A unique identifier for an Electrical-Circuit-Type.

electrical-circuit-type-desc

A text description of an Electrical-Circuit-Type, e.g.:
life safety
critical
equipment.

electrical-distribution-panel-id

A unique identifier for a particular Electrical-Distribution-Panel.

electrical-distribution-panel-nomenclature

The term of reference for a particular Electrical-Distribution-Panel.

electrical-distribution-unit-type-cd

A unique identifier for an Electrical-Distribution-Unit-Type.

electrical-distribution-unit-type-desc

A text description of an Electrical-Distribution-Unit-Type, e.g.:

generator
breaker box
transformer.

electrical-service-type-cd

A unique identifier for an Electrical-Service-Type.

electrical-service-type-desc

A text description of an Electrical-Service-Type, e.g.:

lighting
receptacles.

employee-labor-rate

The hourly labor rate in dollars for which maintenance hours will be charged by a Maintenance-Organization.

end-item-cd

A unique identifier for major items of equipment that are made up of several components,
e.g.:

x-ray systems.

equipment-availability-rsn-cd

The unique identifier for an Equipment-Availability-Reason.

equipment-availability-rsn-desc

The text description of the reason equipment is available:

dispatched
support maintenance
deadlined
on loan.

equipment-availability-type-cd

The unique identifier for an Equipment-Availability-Type.

equipment-availability-type-desc

The text description of an Equipment-Availability-Type:

available
nonavailable.

equipment-condition-cd

Code to identify the overall condition of an equipment item, e.g.:

A
E
E
F
G.

equipment-condition-status-cd

The unique identifier for an Equipment-Condition-Status.

equipment-condition-status-desc

The text description of an Equipment-Condition-Status:

operational
not operational.

equipment-item-status-date-time-cd

A code that identifies the date and time when the status of an equipment item changed.

equipment-materiel-assignment-quantity-authorized

The quantity of Equipment-Materiel authorized for an Organization.

equipment-materiel-assignment-quantity-in-use

The quantity of assigned-materiel in use in an Organization.

equipment-materiel-assignment-quantity-on-loan

Represents the quantity of assigned materiel on loan from the assigned Organization.

equipment-materiel-assignment-quantity-requested-for-authorization

Represents the quantity of materiel requested for authorization to an Organization.

equipment-system-condition-status-cd

Indicates the operating status of an Equipment-System.

equipment-system-id

A unique identification of an Equipment-System.

equipment-system-life-expectancy-years

A numeric value identifying the life expectancy of an Equipment-System.

equipment-system-priority-cd

A code that indicates the priority of an Equipment-System.

equipment-system-scheduled-service-base-date

The date from which scheduled service periods for an Equipment-System are computed.

equipment-system-status-date-time-cd

A code that identifies the date and time when the status of an Equipment-System changed.

equipment-type

Type of equipment.

estimated-cost

The Government estimate for the cost of a Facility-Project.

estimated-funding-amount

The estimated cost in dollars of a Facility-Project, usually provided by the facility engineer or construction agent.

expiration-date

The date after which a Sterile-Pack can no longer be used safely.

facility-complex-id

A unique identifier for a Facility-Complex.

facility-complex-name

The name for a given Facility-Complex.

facility-functional-use-condition

The condition that a functional area is in; must meet mission requirements.

facility-function-use-square-feet

The amount of usable space allocated to one facility function.

facility-functional-use-workload

The measurement of a Facility's usage in terms of patient contacts.

facility-id

The unique identification of a Facility.

facility-nomenclature

The name given to a Facility.

facility-organization-rsn-cd

The unique identifier for a Facility-Organization-Reason.

facility-organization-rsn-desc

The text description of a Facility-Organization-Reason, e.g.:

- emergency services
- Medical Logistics
- dining hall
- primary care
- family practice
- ob-gyn
- dental services
- orthopedics
- medical-surgical nursing
- intensive care
- radiology.

facility-project-scope-type-cd

A unique identifier for a particular Facility-Project-Scope-Type.

facility-project-scope-type-desc

A text description of a particular Facility-Project-Scope-Type, e.g.:

addition
alteration
renovation.

facility-site-indic

A binary indicator specifying whether or not a Location is a Facility-Site. Valid values: Yes, No.

facility-system-class-cd

A unique code that identifies a Facility-System-Class.

facility-system-class-desc

The text description of a Facility-System-Class, e.g.:

structural
architectural
mechanical
control
electrical
communication.

facility-system-equipment-item-type-cd

The unique identifier for a Facility-System-Equipment-Item-Type.

facility-system-equipment-type-desc

The text description of a Facility-System-Equipment-Item-Type, e.g.:

elevator
escalator
chiller.

facility-system-function-condition-cd

A representation of the condition of a particular Facility-System for a particular function.

facility-system-id

A unique identifier for a Facility-System.

facility-system-indic

A binary indicator specifying whether or not a Singly-Managed-Materiel-Equipment-Item belongs to a Facility-System. Valid values: Yes, No.

facility-type-cd

A code that identifies a Facility-Type.

facility-type-name

The descriptive name of a Facility-Type, e.g.:

Building
Structure
Suite
Room.

federal-materiel-item-indic

A binary indicator that specifies whether or not a Materiel-Catalog-Item is a Federal-Materiel-Catalog-Item. Valid values: Yes, No.

federal-organization-type-cd

A unique identifier for a Federal-Organization-Type.

federal-organization-type-desc

A text description of a Federal-Organization-Type, e.g.:

DoD
State Department
Department of Veterans Affairs.

filtration-percent

A percentage rating of the efficiency of an air filter (i.e., the percentage of particles of a specific size removed from the air).

fiscal-year-cd

A code representing a Fiscal-Year.

floor-area-ratio

The ratio of functional area to total area for a Building.

floor-to-ceiling-height

The distance from the finished floor surface of a Room to the bottom surface of the ceiling.

floor-to-floor-height

The distance from the finished floor surface of a Room to the finished floor surface of the space on the next higher story of the Building.

foreign-owned-indic

Indicates whether or not a Source-of-Supply is a foreign-owned business. Valid values: Yes, No.

foundation-depth

A measurement from the surface of the ground to the bottom of a Foundation.

foundation-thickness

A measurement from the top of a Foundation to the bottom.

foundation-type-cd

The unique identifier for a Foundation-Type.

foundation-type-desc

The text description of a Foundation-Type, e.g.:

slab on grade
grade beam
drilled pier
pilings.

functional-category-cd

A unique code that identifies a Functional-Category.

functional-category-desc

A text description of a Functional-Category.

functional-space-id

A unique identifier for a Functional-Space.

functional-space-type-cd

An identifier for a Functional-Space-Type.

functional-space-type-desc

A text description for a Functional-Space-Type.

fund-account-id

The unique identifier for a Fund-Account.

fund-account-organization-role-cd

The unique identifier of a role between an Organization and Fund-Accounts.

fund-account-organization-role-name

Descriptive name of the role an Organization plays in Fund-Accounts:

performer
disburser
holder
authorized user
accountable.

fund-cd

Identifier of a specific Fund-Account-Class.

fund-cite

The specific citing of the Fund-Account appropriation as it was issued by Congress and modified by the Services.

funds-request-id

A unique identifier for a Funds-Request.

fund-type-cd

A unique identifier for a Fund-Type. (See fund-type-nomenclature.)

fund-type-nomenclature

The descriptive name of a Fund-Type:

<u>type-cd</u>	<u>type-nomenclature</u>
O&M	Operations and Maintenance
OP	Other Procurement (Capital Investment)
RDTE	Research, Development, Test, and Evaluation
DBOF	Defense Business Operations Fund.

gdc\optional

A generic descriptor for a drug item.

generic-equipment-indic

A binary indicator specifying whether or not a Managed-Materiel-Item is a Generic-Equipment-Item. Valid values are: Yes, No.

geolocation-cd

An expression of a geographical Location.

government-bill-of-lading\optional

A contract for the physical movement of goods.

gross-area-square-feet

The total area of a Facility.

ground-fault-circuit-indic

An indicator specifying whether or not an Electrical-Circuit is designed to shut off in the event of a ground fault. Valid values: Yes, No.

group-managed-equipment-location-excess-quantity

The excess quantity of a specific type of Group-Managed-Equipment at a specific Location.

group-managed-equipment-quantity

The quantity of a specific type of Group-Managed-Equipment at a specific Location.

group-managed-undated-materiel-supply-location-excess-quantity

Identifies the location of excess quantities of Group-Managed-Undated-Materiel-Supply.

group-managed-undated-supply-operating-quantity

The quantity of group managed undated supply items at a particular Location that are available for operation.

group-managed-undated-supply-suspended-quantity

The quantity of group managed undated supply items at a particular Location that have been suspended and are not available for immediate issue.

group-priority-cd

A code to identify the priority of Group-Managed-Equipment.

group-scheduled-service-base-date

The date from which scheduled service periods for a Group-Managed-Equipment-Location are computed.

hazardous-item-indic

An indicator specifying whether or not an item that has as one of its ingredients a substance that has been determined to be hazardous and must be tracked from the time it is generated until it is properly disposed. Valid values: Yes, No.

health-device-cd

The unique identifier for a Health-Device-Class.

health-device-desc

A text description of the function of a Health-Device-Class.

health-device-indic

A binary indicator specifying whether or not a Managed-Materiel-Item is a Health-Device. Valid values: Yes, No.

history-begin-date

The date that records when an Organization-Materiel item began processing recurring issue demands.

hours-expended

The man-hours charged against a Service-Order-Line by a particular technician.

hvac-unit-type-cd

A unique identifier for an HVAC-Unit-Type.

hvac-unit-type-desc

A text description for an HVAC-Unit-Type, e.g.:
mixing box
radiator
register.

ideal-facility-functional-capacity

The maximum capability for a given function for which a Facility was designed.

ideal-facility-functional-square-feet

The amount of space directed by appropriate criteria for a specific facility function.

ideal-facility-id

A unique identifier for an Ideal-Facility.

ideal-receptacle-quantity

The number of receptacles of a particular type contained in a particular Ideal-Facility.

index-no

A unique identifier of a SMEI or Equipment-System assigned at the organizational level.

individual-communication-link-rsn-cd

The unique identifier of an Individual-Communication-Link-Reason.

individual-communication-link-rsn-desc

A statement of a reason why an Individual may be assigned a Communication-Link.

individual-id

A unique identifier for an Individual.

individual-location-rsn-cd

A unique identifier for an Individual-Location-Reason.

individual-location-rsn-desc

A text description of a reason that an Individual might be assigned to a specific Location.

individual-organization-role-cd

A unique identifier for Individual-Organization-Role.

individual-organization-role-desc

A text description of a role an Individual might play in an Organization, e.g.:

Military-Officer

Military-Enlisted.

individual-receipt-role-cd

A unique identifier for Individual-Receipt-Role.

individual-receipt-role-desc

A description of a role which an Individual might play in the receipt process:

receiver

inspector

acceptor

discrepant property holder.

individual-suspension-role-cd

A unique identifier for a Individual-Suspension-Role.

individual-suspension-role-desc

The description of a role an Individual might play in the process of suspending materiel:

initiator

patient

reporter

point of contact (POC)

tester

evaluator.

individual-training-role-cd

A unique identifier for an Individual-Training-Role.

individual-training-role-desc

The text description of an Individual-Training-Role:

instructor
assistant instructor
class scheduler
classroom key holder
applicant for program
approved applicant for program
rejected applicant for program
training aids POC
organization training coordinator
billeting coordinator
range officer
transportation coordinator.

inspection-cycle-mos-quantity

The number of months after which the initial inspection for serviceability must be performed.

inspection-task-type-cd

Identifies an Inspection-Task-Type. See inspection-task-type-desc. Sample values: A1, B1, C1.

inspection-task-type-desc

The description of an Inspection-Task-Type, expressed as conditions which should be checked for, e.g.:

<u>type-cd</u>	<u>type-desc</u>
A1	brittleness; easily broken, snapped, or torn
B1	bacterial reaction; evidence of fermentation/yeast/bacteria that have survived the canning process or have gained access to the container through damage or manufacturing imperfections
C1	corrosion/rust/oxidation/verdigris; eroding or chemical deterioration of metals.

Reference: DLAM 4155.5 Appendix M.

installation-id

Unique identifier for an installation.

instruction-program-indic

A binary indicator specifying whether or not an Available-Service is an Instruction-Program.
Valid values: Yes, No.

instruction-program-type-cd

A unique identifier for an Instruction-Program-Type.

instruction-program-type-desc

A text description of an Instruction-Program-Type, e.g.:
Health-Device-Class-Instruction-Program
Generic-Equipment-Instruction-Program
Materiel-Catalog-Item-Manufacturer-Model-Instruction-Program.

inventory-freeze-flag

An indicator of whether or not an instance of Supply-Materiel has been placed in a suspended status so that an inventory can be conducted. Valid values: Yes, No.

isolation-indic

A binary indicator that specifies whether or not an Electrical-Circuit is isolated (i.e., equipotential ground versus a common ground). Valid values: Yes, No.

issued-ytd-amount

The dollar amount of funds that have been expended to date from a Fund-Allocation.

issuing-organization-id

The unique identifier for an Organization which has issued a Funds-Request.

labor-rate

The hourly rate charged for labor by a Maintenance-Organization.

line-item-desc

A text description of a Generic-Equipment-Class, e.g.:
surgical instrument sterilizer.

line-item-no

A unique identifier for a Generic-Equipment-Class. See SB 700-20 for a listing of valid values.

litigation-cd

A code to show whether or not materiel received is being held waiting resolution of discrepancy action(s). Valid values: Yes, No.

local-purchase-surcharge-rate

The surcharge rate applied by a DoD organization on local purchase.

location-id

A unique identifier for a Location.

location-inventory-freeze-flag

An indicator that specifies whether or not items at a specific Location are currently being inventoried. Valid values: Yes, No.

logical-room-no

The sequential number assigned to a Room in a Building based on its arrangement with respect to other Rooms.

lot-managed-undated-supply-operating-quantity

The quantity of operational lot-managed undated supplies, belonging to a particular Lot and stored at a particular Location.

lot-managed-undated-supply-suspended-quantity

The quantity of suspended lot-managed undated supplies, belonging to a particular Lot and stored at a particular Location.

lot-no

A number assigned to a Lot. Given a particular Materiel-Catalog-Item-Manufacturer, it is unique.

maintenance-category-type-cd

A unique identifier for a Maintenance-Category-Type. Valid values: G, S, T.

maintenance-category-type-desc

A text description of a Maintenance-Category-Type:

<u>type-cd</u>	<u>type-desc</u>
G	general equipment
S	electronic equipment
T	imaging equipmen .

maintenance-note-text

Unique information that the maintenance technician wishes to record about a Singly-Managed-Equipment-Item.

maintenance-organization-indic

A binary indicator that specifies whether or not a DoD-Organization is a Maintenance-Organization. Valid values: Yes, No.

manufacture-date-suspension-from

The starting date of a range of dates-of-manufacture constraining a Materiel-Suspension-by-Manufacture-Date.

manufacture-date-suspension-to

The ending date of a range of dates-of-manufacture constraining a Materiel-Suspension-by-Manufacture-Date.

manufacturer-catalog-no

The Manufacturer's catalog number for a Materiel-Catalog-Item that he produces.

manufacturer-catalog-nomenclature

The Manufacturer's description of a Materiel-Catalog-Item that he produces.

manufacturer-indic

A binary indicator specifying whether or not a Source-of-Supply is a Manufacturer.

manufacturer-item-price

The price for a Materiel-Catalog-Item produced by a particular Manufacturer.

manufacturer-model-price

The price assigned by a Manufacturer for a specific model.

manufacturer-part-indic

An indicator showing whether or not a particular item produced by a particular Manufacturer is a spare part. Valid values: Yes, No.

manufacturer-part-no

A unique identifier of a Part.

manufacturer-unit-of-issue

The unit quantity in which a Materiel-Catalog-Item is available from a Manufacturer.

materiel-catalog-item-id

A unique identifier for a Materiel-Catalog-Item.

materiel-device-risk-level-cd

A unique identifier for Materiel-Device-Risk-Level.

materiel-device-risk-level-desc

A text description of the Materiel-Device-Risk-Level.

materiel-device-risk-level-factor

The identifier used to determine the priority of items involved in the preventive maintenance of medical items.

materiel-function-type-cd

A classification of a Materiel-Function-Type. Valid values: M, N, C.

materiel-function-type-desc

A text description of a Materiel-Function-Type:

<u>type-cd</u>	<u>type-desc</u>
M	Medical item
N	Non-medical item
C	Centrally procured item.

materiel-order-line-type-cd

A unique identifier of Materiel-Order-Line-Type.

materiel-order-line-type-desc

A text description of Materiel-Order-Line-Type:

Materiel-Order-Line-By-Manufacturer
Materiel-Order-Line-By-Option
Materiel-Order-Line-By-Type.

materiel-receipt-discrepancy-action-type-cd

A code identifying the type of action requested for disposition of a particular item. Valid values include: 1A, 1C, 1Z.

materiel-receipt-discrepancy-action-type-desc

A text description of a Materiel-Receipt-Discrepancy-Action-Type, e.g.:

<u>type-cd</u>	<u>type-desc</u>
1A	disposition instructions requested
1C	supporting supply documentation requested
1Z	other action requested; see remarks

materiel-receipt-discrepancy-type-cd

A unique identifier for Materiel-Receipt-Discrepancy-Type. Valid values: C1, D1, M1.

materiel-receipt-discrepancy-type-desc

A text description of what disposition action is being requested against discrepant materiel:

type-cd

type-desc

C1

condition other than that indicated on release/receipt document

D1

not received

M1

addressed to wrong activity.

materiel-structure-rsn-cd

A unique identifier for Materiel-Structure-Reason.

materiel-structure-rsn-desc

A text description of a Materiel-Structure-Reason, e.g.:

substitute

accessory

part

component

supply.

materiel-suspension-action-date

The date the Materiel-Suspension action was formally effected.

materiel-suspension-action-narrative

A detailed description in plain language of the Materiel-Suspension-Action taken.

materiel-suspension-action-type-cd

A unique identifier for a Materiel-Suspension-Action-Type.

materiel-suspension-action-type-desc

A text description of Materiel-Suspension-Action-Type, e.g.:

destroy

suspend

return for credit

return without credit

provide copies of Destruction for Credit

return for testing

return for replacement in kind.

materiel-suspension-category-cd

A unique identifier for a Materiel-Suspension-Category.

materiel-suspension-category-desc

A text description of a Materiel-Suspension-Category:

Manufacturer

Model

Lot

materiel-suspension-end-date

The date which materiel was removed from suspension and became available for issue or use.

materiel-suspension-no

A unique identifier for a Materiel-Suspension.

materiel-suspension-notice-mode

The mode by which a Materiel-Suspension-Notice is communicated to the receivers.

materiel-suspension-notice-date

Date that the Materiel-Suspension-Notice was promulgated.

materiel-suspension-notice-no

A unique identifier for a Materiel-Suspension-Notice.

materiel-suspension-notice-type-cd

A code that uniquely identifies a Materiel-Suspension-Notice-Type.

materiel-suspension-notice-type-desc

A text description of a Materiel-Suspension-Notice-Type:
Organization
Individual.

materiel-suspension-reply-by-date

The date a reply to the Materiel-Suspension-Notice is due to the sending organization.

materiel-suspension-rsu-text

Narrative that explains the justification for suspending materiel from issue or use.

materiel-suspension-start-date

The date on which materiel was removed from issue or use.

materiel-suspension-type-cd

A code that identifies Materiel-Suspension-Type. Valid values: I, II, III.

materiel-suspension-type-desc

A text description of a Materiel-Suspension-Type:

<u>type-cd</u>	<u>type-desc</u>
I	Use of the item is known to cause harm
II	Use of a supply item that is suspected to cause harm
III	A defect in an equipment item.

maximum-order-quantity

The maximum quantity a Vendor will sell on a specific Order for a specific item.

mci-mfr-id

A unique identifier for a Materiel-Catalog-Item made by a specific Manufacturer.

mci-mfr-model-id

A unique identifier for a specific model of a Materiel-Catalog-Item made by a specific

Manufacturer.

mci-mfr-model-support-item-rsn-cd

A unique identifier for MCI-MFR-Model-Support-Item-Rsn.

mci-mfr-model-support-item-rsn-desc

An explanation of the requirement for an item of support related to a specific item of equipment.

media&status-cd

A code in the Order-Line that is used in processing MILSTRIP orders.

medical-gas-type-cd

A unique identifier for a Medical-Gas-Type.

medical-gas-type-desc

A text description of a Medical-Gas-Type.

medical-materiel-catalog-item-type-cd

A unique code to identify a Medical-Materiel-Catalog-Item-Type.

medical-materiel-catalog-item-type-desc

The text description of a Medical-Materiel-Catalog-Item-Type, e.g.:

- drug item
- MedSurg item
- dental item
- radiology item
- diagnostic item
- optical item
- veterinary item.

medical-surgical-class-cd

A unique identifier for a Medical-Surgical-Class.

medical-surgical-class-name

A description of a Medical-Surgical-Class.

milestone-date

The target date of a significant event in a Facility-Project.

milestone-type-cd

A unique identifier for a Milestone-Type.

milestone-type-desc

A text description of a Milestone-Type of a Facility-Project that is recorded, e.g.:

- date identified
- design funds requested
- design funds received
- 35 percent designed.

minimum-order-dollar-value

The minimum dollar value a Vendor will sell on a particular Order.

minimum-order-quantity

The minimum quantity a Vendor will sell on a specific Order for a specific item.

mobility-category-cd

A unique identifier for Mobility-Category.

mobility-category-desc

A text description of a particular Mobility-Category, e.g.:
fixed
non-fixed.

model-desc

The description of a specific Materiel-Catalog-Item-Manufacturer-Model.

model-no

The Manufacturer's assigned identifier for a specific grouping of an equipment item.

model-option-no

An identifier unique within Materiel-Catalog-Item-Manufacturer-Model designating a set of functions beyond the basic model.

model-option-price

The additional price a Manufacturer charges for a model option.

net-area-square-feet

The usable area within a Facility, not to include wall/crawl space.

net-volume-cubic-feet

The cubic footage of a Facility.

noise-level

The specified noise level for an Ideal-Room.

non-wrm-quantity-in-excess

Quantities of items that are excess to the needs of the local Organization and were not generated from a WRM-Program.

no-of-acres-assigned

The total number of acres assigned to a Facility.

no-of-acres-used

Land occupied by Buildings and their attendant structures.

no-of-improved-acres

Amount of land upon which buildings, roads, parking lots, culverts, or any other man-made structures are located.

no-of-stories

The total number of floors in a particular Superstructure.

nsn

National Stock Number

object-class-cd

The unique identifier for an Object-Class.

object-class-name

The descriptive name of an Object-Class:

<u>class-cd</u>	<u>class-name</u>
11.1	Full-time permanent (Civilian)
11.3	Other than full-time permanent
11.5	Other personnel compensation
11.7	Military personnel
11.8	Special personal services payments
11.9	Total personnel compensation (Total of 11.1 through 11.8)

PERSONNEL BENEFITS

12.1	Civilian personnel benefits
12.2	Military personnel benefits
13.0	Benefits for former personnel

CONTRACTUAL SERVICES AND SUPPLIES

21.0	Travel and transportation of persons
22.0	Transportation of things

RENT, COMMUNICATIONS, AND UTILITIES

23.1	Rental payments to GSA
23.2	Rental payments to others
23.3	Communications, utilities, and miscellaneous charges
24.0	Printing and Reproduction

CONSULTING AND OTHER SERVICES

25.1	Consulting services
25.2	Other services
26.0	Supplies and materials

ACQUISITION OF CAPITAL ASSETS

31.0	Equipment
32.0	Land and Structures
33.0	Investments and Loans

GRANTS AND FIXED CHARGES

41.0	Grants, subsidies, and contributions
42.0	Insurance claims and indemnities
43.0	Interests and dividends
44.0	Refunds

OTHER

91.0	Unvouchered
92.0	Undistributed
93.0	Limitations and expenses
99.0	Subtotals, obligations
99.9	Total obligations

obligated-ytd-due-out-amount

The dollar amount of funds held in reserve for Order-Lines when stock is not available

occupancy-type-cd

A unique identifier for Occupancy-Type.

occupancy-type-desc

A text description for Occupancy-Type, e.g.:

lease
ownership
tenancy.

operating-amount-authorized

The dollar amount on a DBOF-Fund-Account that has been authorized for spending for a period of time.

operating-amount-committed

The dollar amount on a DBOF-Fund-Account that has been reserved to fund Order-Lines for which a contract has not been issued.

operating-amount-obligated

The dollar amount on a DBOF-Fund-Account for a Government activity that has been ordered or received or a Contract has been awarded.

operating-quantity-on-hand

The quantity of Organization-Materiel that is available for issue to customers.

operating-suspended-quantity

Quantities of a supply item that are unserviceable and not available for issue to customers.

operational-status

The indicator of an item denoting operational or non operational.

option-flag

Indicates whether or not the Contract has option years. Valid values: Yes, No.

option-indic

An indicator as to whether or not a Manufactured-Item contains extra-cost features or not.
Valid values: Yes, No.

order-id

A unique identifier for an Order.

order-individual-role-cd

A unique identifier for Order-Individual-Role.

order-individual-role-name

A description of the role an Individual may play in the administration of an Order:

requestor

contracting officer

ordering officer

contracting officer technical representative (COTR)

contracting officer representative (COR)

supplier representative.

order-line-cost

The unit cost of a specific Order-Line

order-line-document-no

A unique identifier for an order line document.

order-line-id

Within an Order, a unique identifier for each line item.

order-line-narrative

A description of the materiel item to be procured or the statement of work to be performed for a Service-Order-Line or a Maintenance-Service-Order-Line.

order-line-type-cd

A unique identifier for an Order-Line-Type.

order-line-type-desc

A text description of an Order-Line-Type:

materiel-order-line

service-order-line

facility-order-line.

order-line-sequence-no

A sequential number for an Order-Line.

order-placement-date

The date an Order was placed.

order-receipt-date

The date that an Order is received.

order-start-date

The date on which an Order is started.

order-type-cd

A code that uniquely identifies an Order-Type.

order-type-desc

The text description of the Order-Type, e.g.:

work-order
materiel-order
facility-order.

org-mat-dated-item-cd

Identifies whether or not a Materiel-Catalog-Item has an expiration date and, if it does, whether or not that expiration date can be extended.

org-mat-medical-status-indic

A binary indicator specifying whether or not a Materiel-Catalog-Item is a medical item. Valid values: Yes, No.

org-mat-nomenclature

A description of the characteristics of a materiel item from the standpoint of the Organization which is accountable for it.

org-mat-shelf-life

The number of months from manufacture that an item of Organization-Materiel may be expected to retain its serviceability.

org-mat-susp-flag

Specifies whether or not a materiel item has a suspension notice recorded. Valid values: Yes, No.

org-mat-unit-of-issue

The unit quantity in which a materiel item is normally available in this Organization.

org-mat-unit-of-measure

The lowest unit into which a unit of issue may be broken down for issue.

org-mat-unit-pack

The quantity in units of issue that are placed in a larger shipping container in this Organization.

org-mat-unit-price

The unit price for a materiel item in this Organization.

org-response-date

The date on which the Receiving Organization responded to a Materiel-Suspension-Notice.

org-response-mode

The method by which a Receiving Organization responded to a Materiel-Suspension-Notice.

org-response-quantity-on-hand

The quantity of an item in a Materiel-Suspension-Notice that a Receiving Organization had on hand.

organization-category-cd

A unique identifier for an Organization-Category.

organization-category-desc

The text description of an Organization-Category:

Federal

Non-Federal.

organization-communication-link-rsn-cd

The unique identifier for an Organization-Communication-Link-Rsn.

organization-communication-link-rsn-desc

A descriptive reason for an Organization having access to a Communication-Link.

organization-id

The unique identifier for an Organization.

organization-location-rsn-cd

A unique identifier of an Organization-Location-Rsn.

organization-location-rsn-desc

The text description of an Organization-Location-Rsn.

organization-materiel-type-cd

A unique identifier for Organization-Materiel-Type.

organization-materiel-type-desc

A text description for an Organization-Materiel-Type, e.g.:

Supply-Materiel

Equipment-Materiel.

organization-name

The descriptive name of an Organization.

organization-order-line-role-cd

A unique identifier for an Organization-Order-Line-Role.

organization-order-line-role-desc

A text description of an Organization's relationship to an Order-Line, e.g.:

payer

originator

administrator.

organization-order-role-cd

A unique identifier of an Organization-Order-Role.

organization-order-role-name

Name that identifies a role that an Organization may play with respect to an order:
administrator
authorizer
acceptor
initiator.

organization-service-nomenclature

The text description of a service performed by an Organization; may be different than the standard service-nomenclature describing this Available-Service.

organization-structure-rsn-cd

A unique identifier for an Organization-Structure-Reason.

organization-structure-rsn-desc

A text description of how one Organization might relate to another, e.g.:
Organizations of the same echelon
Organizations of differing echelons
Organizations outside the Federal Government
Organizations within Department of Veterans Affairs
Organizations within Public Health Service
Buyer-vendor.

organization-suspension-reference-no

An identifier of a Materiel-Suspension assigned by an Organization that plays a role in the suspension.

organization-suspension-role-cd

A unique identifier for Organization-Suspension-Role.

organization-suspension-role-desc

A description of a role an Organization may play in the suspension of materiel, e.g.:
tester
suspension administrator.

organization-training-role-cd

A unique identifier for an Organization-Training-Role.

organization-training-role-desc

A text description of an Organization-Training-Role, e.g.:
formal training provision
user attendance
administration
allocation of quotas
accreditation
financing
field evaluation.

organization-unit-assemblage-quantity-authorized

The quantity of a unit assemblage type authorized for an Organization.

organization-unit-assembly-quantity-on-hand

The quantity on-hand of a unit assembly type for an Organization.

organization-unit-assembly-quantity-required

The quantity of a unit assembly type required by an Organization.

original-cost

The initial cost for a Facility.

originating-action-cd

A code that identifies the originating type of order.

pass-fail-indic

A binary indicator specifying whether or not a student has satisfactorily completed a Training-Course. Valid values: Pass, Fail.

permanency-indic

An indication of whether a Facility was designed to be permanent or temporary. Values: Permanent, Temporary.

physical-security-pilferage-indic

An indicator as to whether or not a Materiel-Catalog-Item requires additional storage security because it is subject to theft or because the increased storage requirement is dictated by the type of item, such as narcotics. Valid values: Yes, No.

plumbing-system-type-cd

A unique identifier for a Plumbing-System-Type.

plumbing-system-type-desc

A text description of a Plumbing-System-Type.

power-source-id

A unique identifier for a Power-Source.

power-source-type-cd

A unique identifier for a Power-Source-Type.

power-source-type-desc

A text description of a Power-Source-Type.

precious-metal-indic

Identifies Materiel-Catalog-Item that has a significant amount of a precious metal (e.g., gold, silver) in its makeup and may require additional storage security. Valid values: Yes, No.

preventive-maintenance-cycle-mos

Prescribed number of months between scheduled preventive maintenance service on equipment.

primary-item

A Materiel-Catalog-Item for which a substitute-item is specified in an instance of Substitute-Catalog-Item.

priority-designator

An identifier of the urgency of need for an Order-Line.

program-authorized-funds

Funds authorized and fenced for a Program.

program-committed-funds

Funds that have been committed or set aside for a specific Project within the Program. These funds may be "uncommitted" to fund other projects.

program-fund-account-type-cd

A code that uniquely identifies a Program-Fund-Account-Type.

program-fund-account-type-desc

A text description for a Program-Fund-Account-Type.

program-id

A unique identifier for a Program.

program-name

A text description of a particular Program.

program-obligated-funds

Program funds that have been used (obligated) to pay for specific program requirements. These obligated funds may not be used to pay for other requirements.

program-type-cd

A unique identifier of Program-Type.

program-type-desc

A text description of a Program-Type:
WRM-program.

program-organization-rsn-cd

A unique identifier for a Program-Organization-Reason.

program-organization-rsn-desc

A description of a Program-Organization-Reason, e.g.:
assigned peacetime mission
assigned mobilization mission
assigned training mission.

programmed-funding-amount

The amount in dollars appropriated for use on a Facility-Project.

project-id

A unique identifier for a specific Project.

project-name

The nomenclature of a specific Project.

project-organization-rsn-cd

The unique identifier for a Project-Organization-Reason.

project-organization-rsn-desc

A description of the reason why an Organization might be associated with a Project.

project-type-cd

A unique identifier for a Project-Type.

purchase-order-no/optional

A unique identifying number assigned by the contracting officer that is a binding agreement between the Government and a Vendor.

quantity-of-beds

The number of beds in a Facility.

quantity-ordered

The quantity of items ordered in an Order-Line.

quantity-received

A numeric value representing the actual quantity of an item received.

receipt-date

The date materiel or services were received by an Organization.

receipt-suffix-cd

A code that serves to distinguish one Receipt-Of-Goods-And-Services from another for a given Order. The first suffix code for an Order will always be blank.

reimbursement-cd

An identifier of whether the issuance or turn-in of is to involve the transfer of funds.

reinspection-cycle-mos-quantity

Identifies a period in months when reinspection for serviceability must be performed.

repair-parts-quantity-on-hand

Quantity of supply items that is used to maintain equipment.

report-status

The representation of the extent to which a Managed-Materiel-Reporting-Requirement has been met.

required-delivery-date

A statement of the date on which materiel specified on an Order-Line must be delivered to the ordering Organization.

requirement-cd

A code to group issue demands for calculating stock control levels, reader points, and safety levels.

restriction-end-date

The date a Supply-Restriction ends.

restriction-start-date

The date a Supply-Restriction begins.

risk-managed-indic

An indicator as to whether or not an instance of Organization-Materiel-is also an instance of Risk-Managed-Materiel. Valid values: Yes, No.

room-structural-component-id

The unique identifier of a Room-Structural-Component.

room-structural-component-type-cd

A unique identifier of a Room-Structural-Component-Type.

room-structural-component-type-desc

A text description of a Room-Structural-Component-Type, e.g.:
wall
ceiling
floor.

routing-identifier-cd

A communication address within the supply distribution system, or an item's next higher source of supply, or a local source of supply established within the logistics system.

safety-level-quantity

The minimum quantity of a supply materiel that should be on hand to prevent stockouts.

salvage-dollar-value

The residual value of equipment at the time of disposal.

sending-organization-id

A unique identifier for an Organization which has sent a Materiel-Suspension-Notice to another Organization or an Individual.

serial-no

An identifier, unique within the model, assigned by the Manufacturer to identify a specific manufactured device.

service-category-cd

A code that uniquely identifies a Service-Category.

service-category-desc

A text description of a Service-Category:
delivery service
performance service.

service-nomenclature

A description of an Available-Service included in the services catalog.

service-order-completion-date

The date a service order has been completed.

service-order-line-type-cd

A unique identifier for a Service-Order-Line-Type.

service-order-line-type-desc

A text description of a Service-Order-Line-Type:
outsource
in house.

service-order-start-date

The date work began on a Service-Order-Line.

service-schedule-category-cd

A flag to identify whether services to be performed are scheduled or unscheduled.

service-schedule-category-desc

The text description of a Service-Schedule-Category:
scheduled
unscheduled.

service-standard-unit-price

The standard price for a service in the service catalog.

service-task-cd

The unique identifier for a Service-Task.

service-task-desc

The text description of a Health-Device-Service-Task.

service-task-expected-result

The expected result of a service(s) performed.

service-task-sequence-no

The position of a Health-Device-Service-Task in a 1-n sequence of logical service steps.

service-type-cd

A unique code for a particular Service-Type.

service-type-desc

The text description of a particular Service-Type that can be performed.

ship-to-bill-to-modifier

Modification of the ship to/bill to address on an Order-Line.

singly-managed-equipment-condition-cd

The operating and reliability status of an equipment item.

singly-managed-materiel-priority-cd

A unique identifier for the priority of a singly managed equipment item.

singly-managed-materiel-sched-svc-base-dt

A date, month, and year from which scheduled services for a Singly-Managed-Materiel-Equipment-Item are projected.

singly-managed-materiel-type-cd

A unique identifier for a Singly-Managed-Materiel-Type.

singly-managed-materiel-type-desc

The text description of a Singly-Managed-Materiel-Type, e.g.:
assigned
WRM
pending issue
pending disposition.

size-in-acres

The total amount of land within the boundaries of a military installation.

size-in-square-feet

The gross area involved with a Facility-Project to add new space or renovate existing space.

small-business-indic

Indicates whether or not the Source-of-Supply is classified by the SBA as a small business.
Values: Yes, No.

smei-indic

A binary indicator specifying whether or not an Equipment-Materiel-Item is a Singly-Managed-Materiel-Equipment-Item. Valid values: Yes, No.

smei-life-expectancy-years

The expected useful life of a Singly-Managed-Materiel-Equipment-Item in years.

special-project-quantity-on-hand

Identifies quantities of items that are on hand for a special purpose.

standard-dated-item-cd

Identifies whether a Materiel-Catalog-Item has an expiration date, and if it does, whether or not that expiration date can be extended.

Reference: *DLA Manual*, DLAM 4155.5, Appendix M.

standard-life-expectancy-years

The standard number of years a Materiel-Catalog-Item can be expected to have a useful life.

standard-materiel-nomenclature

A description of the characteristics of a Materiel-Catalog-Item.

standard-shelf-life

The number of months from manufacture that a Supply-Materiel-Item may be expected to retain its serviceability.

standard-unit-of-issue

The standard unit quantity in which a Materiel-Catalog-Item is normally available.

standard-unit-of-measure

The lowest unit in which a unit of issue may be broken down.

standard-unit-pack

The standard quantity of units of issue that are placed in a larger shipping container.

standard-unit-price

The standard price of a Materiel-Catalog-Item.

standards-document-text

The text of a Standards-Document.

state-name

State name.

statement-of-work-text

Narrative in the Contract that describes in detail the work the contractor is required to perform.

statement-of-work-template

A standard statement of the work that must be performed for an item in the service catalog.

status-cd

A code in the Order-Line that indicates status information.

sterile-pack-id

A unique identifier for a Sterile-Pack.

sterile-pack-indic

A binary indicator specifying whether or not a Materiel-Catalog-Item is included in a Sterile-Pack. Valid values: Yes, No.

sterile-pack-supply-quantity

The quantity of a particular type of Supply-Materiel in a Sterile-Pack..

sterile-pack-type-cd

The unique identifier for a Sterile-Pack-Type.

sterile-pack-type-desc

The text description of a Sterile-Pack-Type, e.g.:

surgical pack
tonsillectomy pack
dental pack
appendectomy pack.

storage-area-type-cd

A unique identifier for a Storage-Area-Type.

storage-area-type-desc

A text description for a Storage-Area-Type, e.g.:

bin
shelf
freezer.

stored-calibration-cycle-mos

Prescribed number of months between scheduled calibration services on equipment items that are stored.

stored-preventive-maintenance-cycle-mos

Prescribed number of months between scheduled preventive maintenance service on equipment item that is stored.

stored-safety-inspection-cycle-mos

Prescribed number of months between safety inspection services on equipment that is stored.

sub/prime-ratio

The ratio for computing quantities of substitute items to be used in place of a prime item.

supplier-indic

A binary indicator specifying whether or not an Organization is a Source-Of-Supply. Valid values: Yes, No.

supply-restriction-rsn-text

The text description of the reason for a Supply-Restriction.

supply-restriction-type-cd

A code that identifies a Supply-Restriction-Type.

supply-restriction-type-desc

A text description of a Supply-Restriction-Type, e.g.:

credit hold
debarred
accepts no Government orders
bankrupt vendor.

surface-category-cd

A unique identifier for a Surface-Category.

surface-category-desc

The text description of a Surface-Category, e.g.:

wall
ceiling
floor.

surface-finish

The materiel used in finishing an Ideal-Room-Surface.

surface-height

The height of an Ideal-Room-Surface.

surface-length

The length of an Ideal-Room-Surface.

surface-width

The width of an Ideal-Room-Surface.

suspension-by-date-indic

A binary indicator specifying the dates that materiel was suspended from issue or use.

table-of-allowance-minimum-quantity-required

The minimum quantity necessary to accomplish the assigned mission.

table-of-allowance-no

A unique identifier of a specific Table-of-Allowance.

task-id

A unique identifier for a Task.

task-organization-rsn-cd

A unique identifier for a Task-Organization-Reason.

task-organization-rsn-desc

A text description of the reason for an Organization's association with a specific Task, e.g.:

design work
construct
replace
repair.

tech-lit-indic

A code indicating local technical literature availability.

terms-and-conditions

The unique agreement conditions existing on a Contract between the Government and a Vendor.

time-period-begin-date

The beginning date of a particular Time-Period.

time-period-category-cd

A unique identifier for a Time-Period-Category.

time-period-category-desc

Narrative description of a Time-Period-Category, e.g.,
fiscal year
month.

time-period-end-date

The ending date of a particular Time-Period.

time-period-id

A unique identifier for a Time-Period.

total-training-hours

The total number of hours of training in a particular Training-Course.

tracked-item-indic

A binary indicator specifying whether or not a Materiel-Catalog-Item is a Tracked-End-Item.
Valid values: Yes, No.

training-course-id

A unique identifier for a Training-Course.

training-difficulty-level-cd

A specific identifier for a Training-Difficulty-Level. Valid values (currently, Air Force specific): 1, 2, 3, 4.

training-difficulty-level-desc

A text description of a Training-Difficulty-Level:

<u>type-cd</u>	<u>type-desc</u>
1	extremely limited
2	partially proficient
3	competent
4	highly proficient.

training-end-date

The date a specific Training-Course ends.

training-remarks-text

A free text field for additional information about a particular training event.

training-start-date

The date a specific Training-Course starts.

trans-ctl-no

A unique identifier for tracking shipments through the transportation system.

turn-in-credit-amount

The dollar amount of funds of the Order-Lines used to return items from customers when credit was granted.

turn-in-no-credit-amount

The dollar amount of funds of the Order-Lines used to return items from customers when no credit was granted.

turn-in-switch

Identifies whether or not an Order-Line is a turn-in request. Valid values: Yes, No.

unique-level-cd

Identifies whether a level is demand-driven or locally managed.

unit-assembly-criticality-flag

A binary indicator specifying whether or not a Unit-Assembly is critical to the mission of the Unit-Assembly that contains it. Valid values: Yes, No.

unit-assembly-id

A unique identifier of a Unit-Assembly.

unit-assembly-minimum-quantity-required

The minimum quantity of a Materiel-Catalog-Item that must be present within a Unit-Assembly-Type.

unit-assembly-supply-materiel-quantity-authorized

The quantity of a supply materiel authorized for a particular Unit-Assembly.

unit-assembly-supply-materiel-quantity-on-hand

The quantity of a supply materiel item available for a Unit-Assembly.

unit-assembly-supply-materiel-quantity-required

The quantity of a supply materiel item required for a particular Unit-Assembly.

unit-assembly-type-unit-assembly-qty

The number of a type of Unit-Assembly contained in another Unit-Assembly.

unit-assembly-version-cd

The Defense Materiel Standardization Board (DMSB) version (fiscal year) of the DEPMEDS database used to build the Unit-Assembly, e.g., D means 1984.

unit-type-cd

A unique identifier for a Unit-Type. Valid values include: GGXGA.

unit-type-desc

Describes a type of Organization, e.g.:

type-cd

GGXGA

type-desc

air-transportable hospital.

unobligated-ytd-due-out-amount

The dollar amount of funds for Order-Lines for which stock was not available and must be paid for upon receipt.

ups-indic

An indicator of whether an Electrical-Circuit is connected to an uninterrupted power source.
Valid values: Yes, No.

utility-receptacle-id

The unique identifier for a Utility-Receptacle.

utility-receptacle-type-cd

The unique identifier for a Utility-Receptacle-Type.

utility-receptacle-type-desc

A text description of a Utility-Receptacle-Type, e.g.:
electrical receptacle
medical gas outlet
communication receptacle.

vendor-indic

Indicates whether the Source-of-Supply is a Vendor. Valid values: Yes, No.

vendor-item-cost-dollars

The cost of an item as determined by the Vendor.

vendor-item-no

The unique number assigned by a Vendor to an item.

vendor-item-nomenclature

The description of a material item as written by the Vendor

vendor-manufacturer-item-no

The unique number assigned by a vendor to a manufacturer's item.

vendor-manufacturer-item-nomenclature

The description of a Materiel-Catalog-Item by a Vendor of a manufacturer's item.

voltage-phase-desc

Identifies voltage characteristics.

voltage-phase-id

A unique identifier for a Voltage-Phase.

wall-location-designator

The identifier of a location of a specific Wall in a particular Facility that may be a relative location, e.g., "northeast".

warranty-expiration-date-labor

The date indicating the expiration of any labor warranties in effect for an equipment item.

warranty-expiration-date-parts

The date indicating the expiration of any parts warranties in effect for an equipment item.

wire-type-cd

The unique identifier for a Wire-Type.

wire-type-desc

A text description of a Wire-Type, e.g.:
copper 16 gauge.

work-center-cd

A code that identifies a specific maintenance shop within an overall maintenance activity. It designates the shop or satellite facility that usually repairs an equipment item.

work-order-completion-date

The date a Work-Order has been finalized.

work-order-type-cd

A unique identifier for a Work-Order-Type.

work-order-type-desc

A text description of a Work-Order-Type, e.g.:
singly-managed-equipment
group-managed-equipment
equipment-system
facility.

wrm-auth-quantity

The quantity of items authorized for a specific WRM-Program-Materiel.

wrm-critical-item-cd

An indicator that an item of WRM-Prog-Materiel is or is not critical to accomplishing the assigned mission (e.g., Blood Bags in a Blood Donor Center). Valid values: Yes, No.

wrm-deferred-procurement-cd

An indicator that an item of WRM-Prog-Materiel can or cannot have its procurement delayed until a change takes place in the defense structure. Valid values: Yes, No.

wrm-program-type-cd

A unique identifier for a WRM-Program-Type. Valid values: B, C, K, P, M, S, W, T, Z.

wrm-program-type-desc

The descriptive name of a specific WRM-Program-Type:

<u>type-cd</u>	<u>type-desc</u>
B	Biological Warfare/Chemical Warfare (BWCW)
C	Blood Donor Center
K	Shelter Kit
P	40-Bed Surgical Expansion Unit
M	500-Bed Contingency Hospital
S	Aeromedical Staging Facility
W	Hospital Expansion
T	Air-Transportable Hospital
Z	Air-Transportable Clinic.

wrm-program-id

A unique identifier for a WRM-Program.

wrm-quantity-in-excess

The quantity of WRM items in Organization-Materiel that are no longer required.

wrm-sale-amount

The reimbursement amount received from the sale of WRM items.

wrm-suspended-quantity

The quantity of a WRM-Prog-Materiel item that has been suspended from issue or use.

zip-code

A code that identifies a specific Postal-Zone.

4.6 Data Model Business Rules

ASSIGNED-SINGLY-MANAGED-EQUIPMENT-ITEM

The authorized-organization may be the same as the accountable-organization.

CONTRACT-INDIVIDUAL-ASSOC

<u>Role</u>	<u># Individuals</u> <u>Per Contract</u>
A. Sales Rep	0-N
B. Service Rep	0-N
C. Vendor Billing POC	0-1
D. Buyer	1-N
E. Administrator	1
F. Contracting Officer Rep	0-N
G. Contracting Officer Tech Rep	0-N
H. Quality Assurance Evaluator	0-N
I. Contracting Officer	1

Persons in role A, B, and C cannot fill roles D through I on same contract.

DATED-LOT

Manufacture date must be less than expiration date. If the Lot is not suspended² and not flagged for destruction³, then the expiration date must be greater than today; otherwise, the Lot has expired.

DBOF-FUND-ACCT

The operating amount authorized must be greater than or equal to operating amount committed plus operating amount obligated.

EQUIPMENT-MATERIEL-ASSIGNMENT

The sum of quantity in-use and on-loan cannot exceed the quantity authorized.

FACILITY

The no-of-acres-used cannot be greater than the no-of-acres-assigned.

The net-area-square-feet cannot be greater than the gross-area-square-feet.

²No Materiel-Catalog-Item-Manufacturer-Lot-Suspension is in effect for this Lot.

³The destruction flag in the parent Lot indicates a "No" value.

FUND-ACCOUNT-ORGANIZATION

<u>organization-role</u>	<u># of Organizations in role per Fund-Account</u>
performer	1-N
disburser	1
holder	1
authorized user	0-N
accountable	1

FUND-ALLOCATION

The total of issued year-to-date amount plus obligated year-to-date due out amount minus turn in credit amount must be less than or equal to authorized fund amount.

INDIVIDUAL-INSTRUCTION-PROGRAM

Values of individual-training-role-cd must be constrained such that for a given Instruction-Program:

- 1) An Individual in the role of applicant, approved or rejected, cannot be instructor or assistant instructor; and
- 2) An Individual in the role of approved cannot also be rejected.

INSTALLATION

The no-of-improved-acres cannot be greater than the size-in-acres.

MANUFACTURED-ITEM-SUSPENSION

The Model specified in the related instance of Manufactured-Item must be the same as the Model specified in the related instance of Materiel-Catalog-Item-Manufacturer-Model-Suspension.

MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-SUSPENSION

If there are no related instances of Manufactured-Item-Suspension or Model-Option-Suspension, all instances of the Model are suspended⁴. If such related instances do exist, only those specified Manufactured-Items and/or Model-Options are suspended.

MATERIEL-SUSPENSION-INDIVIDUAL-ASSOC

<u>individual-role</u>	<u># of Individuals in role per suspension</u>
initiator	0-N
patient	0-N
reporter	1-N
POC	1-N
tester	1
evaluator	1

⁴Any type of Materiel-Suspension can be further constrained by a range of dates-of-manufacture (see Materiel-Suspension-by-Manufacture-Date).

MATERIEL-SUSPENSION-ORGANIZATION-ASSOC

<u>organization-role</u>	<u># of organizations per suspension</u>
tester	0-N
suspension administrator	0-1

MATERIEL-SUSPENSION-NOTICE

Materiel-suspension-notice-date may be the same as materiel-suspension-reply-by-date but cannot be greater.

MODEL-OPTION-SUSPENSION

The Model specified in the related instance of Materiel-Catalog-Item-Manufacturer-Model-Option must be the same as the Model specified in the related instance of Materiel-Catalog-Item-Manufacturer-Model-Suspension.

ORDER-LINE

If authorized fund amount⁵ minus issued year-to-date amount minus obligated year-to-date due-out amount plus turn-in credit amount is insufficient for the total cost of the Order-Line, the Order-Line will be rejected.

The required-delivery-date may be the same as but not greater than the completion-date.

ORGANIZATION

An organization can either be a Source-of-Supply or a Federal organization, or both at once. If the organization is Federal, it can either be a DoD or non-DoD organization, not both.

ORGANIZATIONAL-MATERIEL

At the time of the first recurring issue demand, a history begin date will be recorded. Until that time, the history begin date will be null.

To maintain stock control levels, a history begin date must be present.

Operating quantity on hand, wrm-quantity in excess, non-wrm-quantity in excess, and special project quantity on hand are mutually exclusive balance quantities.

Date-last-inventory may be the same date but cannot be earlier than the history-begin-date.

ORGANIZATION-ORDER

<u>organization-role</u>	<u># of Organizations per Order</u>
administrator	1
authorizer	1
acceptor	1
initiator	1

⁵Amounts refer to attributes in Fund-Allocation instances related to Order-Line via Order-Line-Fund-Account.

ORGANIZATION-ORDER-LINE

<u>organization-role</u>	<u># of Organizations per Order-Line</u>
Ship to	1
Bill to	1
Inspecting	1
Vendor (Source)	1
Payer*	0-1

*An order-line may identify a payer (disburser) organization. If not identified, it is implied that the "Bill to" organization processes the bill for payment.

ORGANIZATION-UNIT-ASSEMBLAGE-TYPE

Organization unit assemblage quantity on hand must be less than or equal to the organization unit assemblage quantity required.

Organization unit assemblage quantity authorized must be less than or equal to organization unit assemblage quantity required.

PROGRAM-FUND-ACCOUNT

Obligated funds cannot be greater than committed funds. Committed funds cannot be greater than authorized funds.

RECEIPT-OF-GOODS-AND-SERVICES

The receipt-date may be the same as acceptance date but cannot be greater.

SERVICE-ORDER-LINE

The start date cannot be greater than the completion date.

SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM

The acquisition date must be less than or equal to the date in service.

The warranty expiration date for parts must be greater than or equal to the date in service.

The warranty expiration date for labor must be greater than or equal to the date in service.

The salvage dollar value must be less than the acquisition cost.

A Singly-Managed-Materiel-Equipment-Item can be in only one Equipment-System at a time, i.e., it can appear only once in Equipment-System-Item with a null end date.

SUPPLY-MATERIEL

Suspended quantities are not issuable.

Operating suspended quantity is not part of the safety level quantity.

UNIT-ASSEMBLAGE-SUPPLY-MATERIEL

Unit assemblage supply materiel quantity on hand must be less than or equal to unit assemblage supply materiel quantity authorized.

Unit assemblage supply materiel quantity authorized must be less than or equal to unit assemblage supply materiel quantity required.

VENDOR-MATERIEL-CATALOG-ITEM

The minimum-order-quantity must be less than maximum-order-quantity.

WORK-ORDER

The receipt date cannot be greater than the start date.

The start date cannot be greater than the completion date.

WRM-PROGRAM-MATERIEL

On-hand quantity plus due-in quantity must be less than or equal to authorized quantity.

Parent Entity: ACCOUNTABILITY-CATEGORY
Verb Phrase: classifies
Cardinality: zero, one or many
Child Entity: MATERIEL-CATALOG-ITEM

Parent Entity: ACCOUNTABILITY-CATEGORY
Verb Phrase: describes
Cardinality: zero, one, or many
Child Entity: ORGANIZATION-MATERIEL

Parent Entity: ACQUISITION-ADVICE-CATEGORY
Verb Phrase: categorizes
Cardinality: zero, one, or many
Child Entity: MATERIEL-CATALOG-ITEM

Parent Entity: ACQUISITION-ADVICE-CATEGORY
Verb Phrase: describes
Cardinality: zero, one, or many
Child Entity: ORGANIZATION-MATERIEL

Parent Entity: AUTHORIZATION-DOCUMENT
Verb Phrase: authorizes
Cardinality: zero, one, or many
Child Entity: WRM-PROG-MATERIEL

Parent Entity: AUTHORIZATION-DOCUMENT
Verb Phrase: authorizes assignment of
Cardinality: one or more
Child Entity: EQUIPMENT-MATERIEL-ASSIGNMENT

Parent Entity: AUTHORIZATION-DOCUMENT-TYPE
Verb Phrase: classifies
Cardinality: zero, one, or many
Child Entity: AUTHORIZATION-DOCUMENT

Parent Entity: AVAILABLE-SERVICE
Verb Phrase: is initiated by
Cardinality: zero, one, or many
Child Entity: SERVICE-ORDER-LINE

Parent Entity: AVAILABLE-SERVICE
Verb Phrase: is related to
Cardinality: one or more
Child Entity: SERVICE-STRUCTURE

Parent Entity: AVAILABLE-SERVICE
Verb Phrase: may require
Cardinality: one or more
Child Entity: ORGANIZATION-SERVICE

Parent Entity:	AVAILABLE-SERVICE
Verb Phrase:	relates to
Cardinality:	one or more
Child Entity:	SERVICE-STRUCTURE
Parent Entity:	BED-TYPE
Verb Phrase:	acts as
Cardinality:	one or more
Child Entity:	FACILITY-BED-TYPE
Parent Entity:	CAMPUS
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	FACILITY-COMPLEX-ON-CAMPUS
Parent Entity:	CAMPUS
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	FACILITY-ON-CAMPUS
Parent Entity:	CERTIFICATION-TYPE
Verb Phrase:	is offered by
Cardinality:	zero, one, or many
Child Entity:	INSTRUCTION-PROGRAM
Parent Entity:	COMMUNICATION-CABLE-TYPE
Verb Phrase:	used by
Cardinality:	zero, one, or many
Child Entity:	COMMUNICATION-RECEPTACLE
Parent Entity:	COMMUNICATION-INSTRUMENT-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	COMMUNICATION-INSTRUMENT
Parent Entity:	COMMUNICATION-LINK
Verb Phrase:	facilitates
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-COMMUNICATION-LINK-USAGE
Parent Entity:	COMMUNICATION-LINK
Verb Phrase:	facilitates
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-COMMUNICATION-LINK-USAGE
Parent Entity:	COMMUNICATION-LINK-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	COMMUNICATION-LINK

Parent Entity:	COMMUNICATION-RECEPTACLE
Verb Phrase:	acts as
Cardinality:	zero, one, or many
Child Entity:	COMMUNICATION-LINK-RECEPTACLE
Parent Entity:	COMMUNICATION-RECEPTACLE
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	WIRED-COMMUNICATION-INSTRUMENT
Parent Entity:	COMMUNICATION-RECEPTACLE-TYPE
Verb Phrase:	classifies
Cardinality:	zero or one
Child Entity:	COMMUNICATION-RECEPTACLE
Parent Entity:	CONTRACT
Verb Phrase:	has
Cardinality:	zero, one, or many
Child Entity:	CONTRACT-INDIVIDUAL-ASSOC
Parent Entity:	CONTRACT
Verb Phrase:	provides service for
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-SYSTEM
Parent Entity:	CONTRACT
Verb Phrase:	provides service for
Cardinality:	zero, one, or many
Child Entity:	GROUP-MANAGED-EQUIPMENT
Parent Entity:	CONTRACT
Verb Phrase:	provides service for
Cardinality:	zero, one, or many
Child Entity:	SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM
Parent Entity:	CONTRACT
Verb Phrase:	supports
Cardinality:	zero, one, or many
Child Entity:	ORDER-LINE
Parent Entity:	CONTRACT-INDIVIDUAL-ROLE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	CONTRACT-INDIVIDUAL-ASSOC
Parent Entity:	CONTRACT-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	CONTRACT

Parent Entity:	COST-CENTER
Verb Phrase:	contains
Cardinality:	one or more
Child Entity:	DOD-ORGANIZATION
Parent Entity:	DATED-LOT
Verb Phrase:	is located at
Cardinality:	zero, one, or many
Child Entity:	DATED-SUPPLY-LOCATION
Parent Entity:	DATED-SUPPLY-MATERIEL
Verb Phrase:	consists of
Cardinality:	zero, one, or many
Child Entity:	DATED-SUPPLY-LOCATION
Parent Entity:	DRUG-CLASS
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	DRUG-ITEM
Parent Entity:	ELECTRICAL-CIRCUIT-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	ELECTRICAL-CIRCUIT
Parent Entity:	ELECTRICAL-DISTRIBUTION-PANEL
Verb Phrase:	contains
Cardinality:	one or more
Child Entity:	ELECTRICAL-CIRCUIT
Parent Entity:	ELECTRICAL-DISTRIBUTION-SYSTEM
Verb Phrase:	contains
Cardinality:	one or more
Child Entity:	ELECTRICAL-DISTRIBUTION-PANEL
Parent Entity:	ELECTRICAL-DISTRIBUTION-UNIT-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	ELECTRICAL-DISTRIBUTION-UNIT
Parent Entity:	ELECTRICAL-SERVICE-TYPE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	ELECTRICAL-CIRCUIT
Parent Entity:	EMPLOYEE
Verb Phrase:	may act as
Cardinality:	zero, one, or many
Child Entity:	SERVICE-ORDER-LINE-TECHNICIAN

Parent Entity:	EQUIPMENT-AVAILABILITY-REASON
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-SYSTEM-STATUS
Parent Entity:	EQUIPMENT-AVAILABILITY-REASON
Verb Phrase:	pertains to
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-ITEM-STATUS
Parent Entity:	EQUIPMENT-AVAILABILITY-TYPE
Verb Phrase:	categorizes
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-SYSTEM-STATUS
Parent Entity:	EQUIPMENT-AVAILABILITY-TYPE
Verb Phrase:	identifies
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-ITEM-STATUS
Parent Entity:	EQUIPMENT-CONDITION-STATUS
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-SYSTEM
Parent Entity:	EQUIPMENT-CONDITION-STATUS
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	GROUP-MANAGED-EQUIPMENT-LOCATION
Parent Entity:	EQUIPMENT-CONDITION-STATUS
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM
Parent Entity:	EQUIPMENT-MATERIEL
Verb Phrase:	includes
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-SYSTEM
Parent Entity:	EQUIPMENT-MATERIEL
Verb Phrase:	includes
Cardinality:	zero, one, or many
Child Entity:	SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM
Parent Entity:	EQUIPMENT-MATERIEL
Verb Phrase:	is assigned via
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-MATERIEL-ASSIGNMENT

Parent Entity: EQUIPMENT-MATERIEL-ASSIGNMENT
 Verb Phrase: assigns
 Cardinality: zero, one, or many
 Child Entity: ASSIGNED-SINGLY-MANAGED-EQUIPMENT-ITEM

Parent Entity: EQUIPMENT-MATERIEL-ASSIGNMENT
 Verb Phrase: assigns
 Cardinality: zero, one, or many
 Child Entity: EQUIPMENT-SYSTEM

Parent Entity: EQUIPMENT-SYSTEM
 Verb Phrase: contains 2 or more
 Cardinality: one, or more
 Child Entity: EQUIPMENT-SYSTEM-ITEM

Parent Entity: EQUIPMENT-SYSTEM
 Verb Phrase: may require
 Cardinality: zero, one, or many
 Child Entity: EQUIPMENT-SYSTEM-WORK-ORDER

Parent Entity: EQUIPMENT-SYSTEM
 Verb Phrase: relates to
 Cardinality: zero, one, or many
 Child Entity: EQUIPMENT-SYSTEM-STATUS

Parent Entity: FACILITY
 Verb Phrase: requires
 Cardinality: zero, one, or many
 Child Entity: FACILITY-PROJECT

Parent Entity: FACILITY
 Verb Phrase: contains
 Cardinality: zero, one, or many
 Child Entity: FACILITY-FUNCTIONAL-USE

Parent Entity: FACILITY
 Verb Phrase: contains
 Cardinality: zero, one, or many
 Child Entity: FACILITY-SYSTEM

Parent Entity: FACILITY
 Verb Phrase: contains
 Cardinality: one or more
 Child Entity: FUNCTIONAL-SPACE

Parent Entity: FACILITY
 Verb Phrase: has
 Cardinality: zero, one, or many
 Child Entity: FACILITY-BED-TYPE

Parent Entity:	FACILITY
Verb Phrase:	is associated with
Cardinality:	zero, one, or many
Child Entity:	FACILITY-ORGANIZATION
Parent Entity:	FACILITY
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	FACILITY-STRUCTURE
Parent Entity:	FACILITY
Verb Phrase:	relates
Cardinality:	zero, one, or many
Child Entity:	FACILITY-STRUCTURE
Parent Entity:	FACILITY
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	FACILITY-STANDARD
Parent Entity:	FACILITY-COMPLEX
Verb Phrase:	contains two or more
Cardinality:	one or more
Child Entity:	FACILITY-IN-COMPLEX
Parent Entity:	FACILITY-ORGANIZATION-REASON
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	FACILITY-ORGANIZATION
Parent Entity:	FACILITY-PROJECT
Verb Phrase:	consists of
Cardinality:	one or more
Child Entity:	FACILITY-PROJECT-SCOPE
Parent Entity:	FACILITY-PROJECT
Verb Phrase:	generated from
Cardinality:	zero, one, or many
Child Entity:	FACILITY-PROJECT-WORK-ORDER
Parent Entity:	FACILITY-PROJECT
Verb Phrase:	is funded by
Cardinality:	zero, one, or many
Child Entity:	FACILITY-PROJECT-FUNDING
Parent Entity:	FACILITY-PROJECT-SCOPE
Verb Phrase:	has
Cardinality:	zero, one, or many
Child Entity:	FACILITY-PROJECT-MILESTONE

Parent Entity:	FACILITY-PROJECT-SCOPE-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	FACILITY-PROJECT-SCOPE
Parent Entity:	FACILITY-SITE
Verb Phrase:	represents
Cardinality:	zero or one
Child Entity:	FUNCTIONAL-SPACE
Parent Entity:	FACILITY-SYSTEM
Verb Phrase:	maintained via
Cardinality:	zero, one, or many
Child Entity:	FACILITY-SYSTEM-WORK-ORDER
Parent Entity:	FACILITY-SYSTEM
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-SYSTEM
Parent Entity:	FACILITY-SYSTEM
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	FACILITY-SYSTEM-EQUIPMENT-ITEM
Parent Entity:	FACILITY-SYSTEM
Verb Phrase:	has
Cardinality:	one or more
Child Entity:	FACILITY-SYSTEM-FUNCTION
Parent Entity:	FACILITY-SYSTEM
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	FACILITY-SYSTEM-STRUCTURE
Parent Entity:	FACILITY-SYSTEM
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	FACILITY-SYSTEM-STRUCTURE
Parent Entity:	FACILITY-SYSTEM-CLASS
Verb Phrase:	constrained by
Cardinality:	zero, one, or many
Child Entity:	FACILITY-SYSTEM-CLASS-STDS-DOC
Parent Entity:	FACILITY-SYSTEM-CLASS
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	IDEAL-FACILITY-SYSTEM

Parent Entity:	FACILITY-SYSTEM-CLASS
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	FACILITY-SYSTEM
Parent Entity:	FACILITY-SYSTEM-CLASS
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	FACILITY-SYSTEM-CLASS-STRUCTURE
Parent Entity:	FACILITY-SYSTEM-CLASS
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	FACILITY-SYSTEM-CLASS-STRUCTURE
Parent Entity:	FACILITY-SYSTEM-EQUIPMENT-ITEM-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	FACILITY-SYSTEM-EQUIPMENT-ITEM
Parent Entity:	FACILITY-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	FACILITY
Parent Entity:	FACILITY-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	IDEAL-FACILITY
Parent Entity:	FEDERAL-ORGANIZATION-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	FEDERAL-ORGANIZATION
Parent Entity:	FISCAL-YEAR
Verb Phrase:	fy of funds for
Cardinality:	zero, one, or many
Child Entity:	NON-DBOF-FUND-ACCOUNT
Parent Entity:	FISCAL-YEAR
Verb Phrase:	originating FY for
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE-VERSION
Parent Entity:	FOUNDATION-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	FOUNDATION

Parent Entity:	FUNCTIONAL-SPACE-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	FUNCTIONAL-SPACE
Parent Entity:	FUNCTIONAL-USE-CATEGORY
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	IDEAL-FACILITY-FUNCTIONAL-USE
Parent Entity:	FUNCTIONAL-USE-CATEGORY
Verb Phrase:	classifies the use of
Cardinality:	zero, one, or many
Child Entity:	FACILITY-FUNCTIONAL-USE
Parent Entity:	FUNCTIONAL-USE-CATEGORY
Verb Phrase:	classifies the use of
Cardinality:	zero, one, or many
Child Entity:	FACILITY-SYSTEM-FUNCTION
Parent Entity:	FUNCTIONAL-USE-CATEGORY
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-FUNCTION
Parent Entity:	FUND-ACCOUNT
Verb Phrase:	funded by
Cardinality:	zero, one, or many
Child Entity:	FUNDS-REQUEST
Parent Entity:	FUND-ACCOUNT
Verb Phrase:	funds
Cardinality:	zero, one, or many
Child Entity:	ORDER-LINE-FUND-ACCOUNT
Parent Entity:	FUND-ACCOUNT
Verb Phrase:	funds
Cardinality:	zero, one, or many
Child Entity:	PROGRAM-FUND-ACCOUNT
Parent Entity:	FUND-ACCOUNT
Verb Phrase:	has usage defined by
Cardinality:	zero, one, or many
Child Entity:	FUND-ACCOUNT-ORGANIZATION
Parent Entity:	FUND-ACCOUNT
Verb Phrase:	provides
Cardinality:	zero, one, or many
Child Entity:	FACILITY-PROJECT-FUNDING

Parent Entity:	FUND-ACCOUNT
Verb Phrase:	relates
Cardinality:	zero, one, or many
Child Entity:	FUND-ACCOUNT-STRUCTURE
Parent Entity:	FUND-ACCOUNT-CLASS
Verb Phrase:	identifies funds for
Cardinality:	zero, one, or many
Child Entity:	FUND-ACCOUNT
Parent Entity:	FUND-ACCOUNT-ORGANIZATION-ROLE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	FUND-ACCOUNT-ORGANIZATION
Parent Entity:	FUND-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	FUND-ACCOUNT
Parent Entity:	GENERIC-EQUIPMENT-CLASS
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	GENERIC-EQUIPMENT-ITEM
Parent Entity:	GENERIC-EQUIPMENT-CLASS
Verb Phrase:	is covered by
Cardinality:	zero, one, or many
Child Entity:	GENERIC-EQUIPMENT-CLASS-INSTRUCTION-PROGRAM
Parent Entity:	GENERIC-EQUIPMENT-ITEM
Verb Phrase:	requires
Cardinality:	zero, one, or many
Child Entity:	MANAGED-MATERIEL-REPORTING-REQUIREMENT
Parent Entity:	GROUP-MANAGED-EQUIPMENT
Verb Phrase:	is located in
Cardinality:	zero, one, or many
Child Entity:	GROUP-MANAGED-EQUIPMENT-LOCATION
Parent Entity:	GROUP-MANAGED-EQUIPMENT
Verb Phrase:	may require
Cardinality:	zero, one, or many
Child Entity:	GROUP-MANAGED-EQUIPMENT-WORK-ORDER
Parent Entity:	HEALTH-DEVICE-CLASS
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	HEALTH-DEVICE

Parent Entity: HEALTH-DEVICE-CLASS
 Verb Phrase: is covered by
 Cardinality: zero, one, or many
 Child Entity: HEALTH-DEVICE-CLASS-INSTRUCTION-PROGRAM

Parent Entity: HEALTH-DEVICE-CLASS
 Verb Phrase: requires
 Cardinality: zero, one, or many
 Child Entity: HEALTH-DEVICE-SERVICE-TASK

Parent Entity: HVAC-UNIT-TYPE
 Verb Phrase: classifies
 Cardinality: zero, one, or many
 Child Entity: HVAC-UNIT

Parent Entity: IDEAL-FACILITY
 Verb Phrase: guides
 Cardinality: zero, one, or many
 Child Entity: FACILITY-PROJECT

Parent Entity: IDEAL-FACILITY
 Verb Phrase: identifies
 Cardinality: zero, one, or many
 Child Entity: IDEAL-FACILITY-FUNCTIONAL-USE

Parent Entity: IDEAL-FACILITY
 Verb Phrase: is related to
 Cardinality: zero, one, or many
 Child Entity: IDEAL-FACILITY-STRUCTURE

Parent Entity: IDEAL-FACILITY
 Verb Phrase: relates to
 Cardinality: zero, one, or many
 Child Entity: IDEAL-FACILITY-STRUCTURE

Parent Entity: IDEAL-FACILITY
 Verb Phrase: relates to
 Cardinality: zero, one, or many
 Child Entity: IDEAL-FACILITY-EQUIPMENT

Parent Entity: IDEAL-FACILITY
 Verb Phrase: relates to
 Cardinality: zero, one, or many
 Child Entity: IDEAL-FACILITY-SYSTEM

Parent Entity: IDEAL-FACILITY
 Verb Phrase: specified by
 Cardinality: zero, one, or many
 Child Entity: IDEAL-FACILITY-DOCUMENT

Parent Entity:	IDEAL-FACILITY-DOCUMENT
Verb Phrase:	specifies
Cardinality:	zero, one, or many
Child Entity:	FACILITY-STANDARD
Parent Entity:	IDEAL-ROOM
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	IDEAL-ROOM-RECEPTACLE
Parent Entity:	IDEAL-ROOM
Verb Phrase:	describes
Cardinality:	one or more
Child Entity:	IDEAL-ROOM-SURFACE
Parent Entity:	INDIVIDUAL
Verb Phrase:	associated with
Cardinality:	zero, one, or many
Child Entity:	ORDER-INDIVIDUAL
Parent Entity:	INDIVIDUAL
Verb Phrase:	has
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-ORGANIZATION-ASSOC
Parent Entity:	INDIVIDUAL
Verb Phrase:	has
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-RECEIPT-ASSOC
Parent Entity:	INDIVIDUAL
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-STRUCTURE
Parent Entity:	INDIVIDUAL
Verb Phrase:	participates in
Cardinality:	zero, one, or many
Child Entity:	CONTRACT-INDIVIDUAL-ASSOC
Parent Entity:	INDIVIDUAL
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-STRUCTURE
Parent Entity:	INDIVIDUAL
Verb Phrase:	uses
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-COMMUNICATION-LINK-USAGE

Parent Entity:	INDIVIDUAL
Verb Phrase:	uses
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-LOCATION
Parent Entity:	INDIVIDUAL-COMMUNICATION-LINK-REASON
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-COMMUNICATION-LINK-USAGE
Parent Entity:	INDIVIDUAL-LOCATION-REASON
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-LOCATION
Parent Entity:	INDIVIDUAL-ORGANIZATION-ROLE
Verb Phrase:	defines
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-ORGANIZATION-ASSOC
Parent Entity:	INDIVIDUAL-RECEIPT-ROLE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-RECEIPT-ASSOC
Parent Entity:	INDIVIDUAL-SUSPENSION-ROLE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-INDIVIDUAL-ASSOC
Parent Entity:	INDIVIDUAL-TRAINING-ROLE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-IN-TRAINING-COURSE
Parent Entity:	INDIVIDUAL-TRAINING-ROLE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-INSTRUCTION-PROGRAM
Parent Entity:	INDIVIDUAL
Verb Phrase:	acts as
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-IN-TRAINING-COURSE
Parent Entity:	INDIVIDUAL
Verb Phrase:	acts as
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-INDIVIDUAL-ASSOC

Parent Entity:	INDIVIDUAL
Verb Phrase:	receives
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-INDIVIDUAL-NOTICE
Parent Entity:	INDIVIDUAL
Verb Phrase:	relates
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-INSTRUCTION-PROGRAM
Parent Entity:	INSPECTION-TASK-TYPE
Verb Phrase:	identifies
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-INSPECTION-TASK
Parent Entity:	INSTALLATION
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	INSTALLATION-STRUCTURE
Parent Entity:	INSTALLATION
Verb Phrase:	relates
Cardinality:	zero, one, or many
Child Entity:	INSTALLATION-STRUCTURE
Parent Entity:	INSTRUCTION-PROGRAM
Verb Phrase:	associated with
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-INSTRUCTION-PROGRAM
Parent Entity:	INSTRUCTION-PROGRAM
Verb Phrase:	delivered in
Cardinality:	zero, one, or many
Child Entity:	TRAINING-COURSE
Parent Entity:	INSTRUCTION-PROGRAM-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	INSTRUCTION-PROGRAM
Parent Entity:	LOCATION
Verb Phrase:	is service location of
Cardinality:	zero, one, or many
Child Entity:	SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM
Parent Entity:	LOCATION
Verb Phrase:	is normal location of
Cardinality:	zero, one, or many
Child Entity:	SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM

Parent Entity:	LOCATION
Verb Phrase:	locates
Cardinality:	zero, one, or many
Child Entity:	TRAINING-COURSE
Parent Entity:	LOCATION
Verb Phrase:	holds
Cardinality:	zero, one, or many
Child Entity:	GROUP-MANAGED-EQUIPMENT-LOCATION
Parent Entity:	LOCATION
Verb Phrase:	identifies
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-LOCATION
Parent Entity:	LOCATION
Verb Phrase:	identifies
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-LOCATION
Parent Entity:	LOCATION
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	LOCATION-STRUCTURE
Parent Entity:	LOCATION
Verb Phrase:	locates
Cardinality:	zero, one, or many
Child Entity:	DATED-SUPPLY-LOCATION
Parent Entity:	LOCATION
Verb Phrase:	locates
Cardinality:	zero, one, or many
Child Entity:	STERILE-PACK
Parent Entity:	LOCATION
Verb Phrase:	primary storage for
Cardinality:	zero, one, or many
Child Entity:	WRM-PROGRAM
Parent Entity:	LOCATION
Verb Phrase:	relates
Cardinality:	zero, one, or many
Child Entity:	LOCATION-STRUCTURE
Parent Entity:	LOCATION
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	FACILITY

Parent Entity:	LOCATION
Verb Phrase:	specified by
Cardinality:	zero, one, or many
Child Entity:	GROUP-MANAGED-UNDATED-MATERIEL-SUPPLY-LOCATION
Parent Entity:	LOCATION
Verb Phrase:	specified by
Cardinality:	zero, one, or many
Child Entity:	LOT-MANAGED-UNDATED-SUPPLY-MATERIEL-LOCATION
Parent Entity:	LOCATION-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	LOCATION
Parent Entity:	LOT
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	LOT-MANAGED-UNDATED-SUPPLY-MATERIEL-LOCATION
Parent Entity:	LOT
Verb Phrase:	undergoes
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-LOT-SUSPENSION
Parent Entity:	MAINTENANCE-CATEGORY-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-SYSTEM
Parent Entity:	MAINTENANCE-ORGANIZATION
Verb Phrase:	maintains
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-SYSTEM
Parent Entity:	MAINTENANCE-ORGANIZATION
Verb Phrase:	maintains
Cardinality:	zero, one, or many
Child Entity:	GROUP-MANAGED-EQUIPMENT-LOCATION
Parent Entity:	MAINTENANCE-ORGANIZATION
Verb Phrase:	maintains
Cardinality:	zero, one, or many
Child Entity:	SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM
Parent Entity:	MAINTENANCE-SIGNIFICANT-ITEM
Verb Phrase:	described by
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-ITEM-STATUS

Parent Entity:	MANUFACTURED-ITEM
Verb Phrase:	undergoes
Cardinality:	zero, one, or many
Child Entity:	MANUFACTURED-ITEM-SUSPENSION
Parent Entity:	MANUFACTURER
Verb Phrase:	has
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER
Parent Entity:	MANUFACTURER
Verb Phrase:	specified by
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-ORDER-LINE-BY-MANUFACTURER
Parent Entity:	MATERIEL-CATALOG-ITEM
Verb Phrase:	acts as
Cardinality:	zero, one, or many
Child Entity:	MCI-MFR-MODEL-SUPPORT-ITEM
Parent Entity:	MATERIEL-CATALOG-ITEM
Verb Phrase:	comprises
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE-TYPE-MATERIEL-REQUIREMENT
Parent Entity:	MATERIEL-CATALOG-ITEM
Verb Phrase:	has
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER
Parent Entity:	MATERIEL-CATALOG-ITEM
Verb Phrase:	has
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-INSPECTION-TASK
Parent Entity:	MATERIEL-CATALOG-ITEM
Verb Phrase:	identifies
Cardinality:	zero, one, or many
Child Entity:	IDEAL-FACILITY-EQUIPMENT
Parent Entity:	MATERIEL-CATALOG-ITEM
Verb Phrase:	is associated with
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-MATERIEL
Parent Entity:	MATERIEL-CATALOG-ITEM
Verb Phrase:	is associated with
Cardinality:	zero, one, or many
Child Entity:	VENDOR-MATERIEL-CATALOG-ITEM

Parent Entity:	MATERIEL-CATALOG-ITEM
Verb Phrase:	is classified by
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE-TYPE
Parent Entity:	MATERIEL-CATALOG-ITEM
Verb Phrase:	is ordered by
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-ORDER-LINE
Parent Entity:	MATERIEL-CATALOG-ITEM
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-STRUCTURE
Parent Entity:	MATERIEL-CATALOG-ITEM
Verb Phrase:	is required by
Cardinality:	zero, one, or many
Child Entity:	TABLE-OF-ALLOWANCE-MATERIEL-REQUIREMENT
Parent Entity:	MATERIEL-CATALOG-ITEM
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-STRUCTURE
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER
Verb Phrase:	produces
Cardinality:	zero, one, or many
Child Entity:	LOT
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER
Verb Phrase:	produces
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER
Verb Phrase:	represented by
Cardinality:	zero, one, or many
Child Entity:	VENDOR-MANUFACTURER-ITEM
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER
Verb Phrase:	represented by goods in
Cardinality:	zero, one, or many
Child Entity:	GROUP-MANAGED-UNDATED-MATERIEL-SUPPLY-LOCATION
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER
Verb Phrase:	undergoes
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-SUSPENSION

Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL
Verb Phrase:	has
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-OPTION
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL
Verb Phrase:	manufactured as
Cardinality:	zero, one, or many
Child Entity:	MANUFACTURED-ITEM
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL
Verb Phrase:	requires
Cardinality:	zero, one, or many
Child Entity:	MCI-MFR-MODEL-SUPPORT-ITEM
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL
Verb Phrase:	specified by
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-ORDER-LINE-BY-MODEL
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL
Verb Phrase:	taught in
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-INSTRUCTION-PROGRAM
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL
Verb Phrase:	undergoes
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-SUSPENSION
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-OPTION
Verb Phrase:	produced as
Cardinality:	zero, one, or many
Child Entity:	MANUFACTURED-ITEM-WITH-OPTION
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-OPTION
Verb Phrase:	specifies
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-ORDER-LINE-BY-OPTION
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-OPTION
Verb Phrase:	undergoes
Cardinality:	zero, one, or many
Child Entity:	MODEL-OPTION-SUSPENSION
Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-SUSPENSION
Verb Phrase:	includes
Cardinality:	zero, one, or many
Child Entity:	MANUFACTURED-ITEM-SUSPENSION

Parent Entity:	MATERIEL-CATALOG-ITEM-MANUFACTURER-MODEL-SUSPENSION
Verb Phrase:	includes
Cardinality:	zero, one, or many
Child Entity:	MODEL-OPTION-SUSPENSION
Parent Entity:	MATERIEL-DEVICE-RISK-LEVEL
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	RISK-MANAGED-MATERIEL
Parent Entity:	MATERIEL-FUNCTION-TYPE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-CATALOG-ITEM
Parent Entity:	MATERIEL-ORDER-LINE-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-ORDER-LINE
Parent Entity:	MATERIEL-RECEIPT-DISCREPANCY
Verb Phrase:	addressed by
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-RECEIPT-DISCREPANCY-ACTION
Parent Entity:	MATERIEL-RECEIPT-DISCREPANCY-ACTION-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-RECEIPT-DISCREPANCY-ACTION
Parent Entity:	MATERIEL-RECEIPT-DISCREPANCY-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-RECEIPT-DISCREPANCY
Parent Entity:	MATERIEL-RECEIPT-WITH-DISCREPANCIES
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-RECEIPT-DISCREPANCY
Parent Entity:	MATERIEL-STRUCTURE-REASON
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-STRUCTURE
Parent Entity:	MATERIEL-SUSPENSION
Verb Phrase:	involves
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-INDIVIDUAL-ASSOC

Parent Entity:	MATERIEL-SUSPENSION
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-STRUCTURE
Parent Entity:	MATERIEL-SUSPENSION
Verb Phrase:	produces
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-ACTION
Parent Entity:	MATERIEL-SUSPENSION
Verb Phrase:	publicized by
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-NOTICE
Parent Entity:	MATERIEL-SUSPENSION
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-ORGANIZATION
Parent Entity:	MATERIEL-SUSPENSION
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-STRUCTURE
Parent Entity:	MATERIEL-SUSPENSION-ACTION-TYPE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-ACTION
Parent Entity:	MATERIEL-SUSPENSION-ACTION-TYPE
Verb Phrase:	required by
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-NOTICE
Parent Entity:	MATERIEL-SUSPENSION-CATEGORY
Verb Phrase:	scopes
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION
Parent Entity:	MATERIEL-SUSPENSION-NOTICE-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-NOTICE
Parent Entity:	MATERIEL-SUSPENSION-ORGANIZATION
Verb Phrase:	participates in
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-ORGANIZATION-ASSOC

Parent Entity:	MATERIEL-SUSPENSION-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION
Parent Entity:	MCI-MFR-MODEL-SUPPORT-ITEM-RSN
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	MCI-MFR-MODEL-SUPPORT-ITEM
Parent Entity:	MECHANICAL-SYSTEM-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	MECHANICAL-SYSTEM
Parent Entity:	MEDICAL-GAS-SYSTEM
Verb Phrase:	contains
Cardinality:	one or more
Child Entity:	MEDICAL-GAS-OUTLET
Parent Entity:	MEDICAL-GAS-TYPE
Verb Phrase:	provided by
Cardinality:	zero, one, or many
Child Entity:	MEDICAL-GAS-SYSTEM
Parent Entity:	MEDICAL-MATERIEL-CATALOG-ITEM-TYPE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	MEDICAL-MATERIEL-CATALOG-ITEM
Parent Entity:	MEDICAL-SURGICAL-CLASS
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	MEDICAL-SURGICAL-ITEM
Parent Entity:	MILESTONE-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	FACILITY-PROJECT-MILESTONE
Parent Entity:	MOBILITY-CATEGORY
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	FACILITY
Parent Entity:	NON-DBOF-FUND-ACCOUNT
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	FUND-ALLOCATION

Parent Entity:	OBJECT-CLASS
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	FUND-ALLOCATION
Parent Entity:	OCCUPANCY-TYPE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	FACILITY
Parent Entity:	ORDER
Verb Phrase:	associated with
Cardinality:	zero, one, or many
Child Entity:	ORDER-INDIVIDUAL
Parent Entity:	ORDER
Verb Phrase:	contains
Cardinality:	one or more
Child Entity:	ORDER-LINE
Parent Entity:	ORDER
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	ORDER-STRUCTURE
Parent Entity:	ORDER
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	ORDER-STRUCTURE
Parent Entity:	ORDER
Verb Phrase:	represented in
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-ORDER
Parent Entity:	ORDER-INDIVIDUAL-ROLE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	ORDER-INDIVIDUAL
Parent Entity:	ORDER-LINE
Verb Phrase:	is funded by
Cardinality:	one or more
Child Entity:	ORDER-LINE-FUND-ACCOUNT
Parent Entity:	ORDER-LINE
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	ORDER-LINE-STRUCTURE

Parent Entity: ORDER-LINE
Verb Phrase: relates to
Cardinality: zero, one, or many
Child Entity: ORDER-LINE-STRUCTURE

Parent Entity: ORDER-LINE
Verb Phrase: represented in
Cardinality: zero, one, or many
Child Entity: ORGANIZATION-ORDER-LINE

Parent Entity: ORDER-LINE
Verb Phrase: results in
Cardinality: zero, one, or many
Child Entity: RECEIPT-OF-GOODS-AND-SERVICES

Parent Entity: ORDER-LINE
Verb Phrase: supports
Cardinality: zero, one, or many
Child Entity: PROGRAM

Parent Entity: ORDER-LINE-TYPE
Verb Phrase: categorizes
Cardinality: zero, one, or many
Child Entity: ORDER-LINE

Parent Entity: ORDER-TYPE
Verb Phrase: classifies
Cardinality: zero, one, or many
Child Entity: ORDER

Parent Entity: ORGANIZATION
Verb Phrase: has
Cardinality: zero, one, or many
Child Entity: FUND-ACCOUNT-ORGANIZATION

Parent Entity: ORGANIZATION
Verb Phrase: holding
Cardinality: zero, one, or many
Child Entity: SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM

Parent Entity: ORGANIZATION
Verb Phrase: is assigned
Cardinality: zero, one, or many
Child Entity: ORGANIZATION-FUNCTION

Parent Entity: ORGANIZATION
Verb Phrase: issues
Cardinality: zero, one, or many
Child Entity: FUNDS-REQUEST

Parent Entity: ORGANIZATION
Verb Phrase: receives
Cardinality: zero, one, or many
Child Entity: MATERIEL-SUSPENSION-ORGANIZATION-NOTICE

Parent Entity: ORGANIZATION
Verb Phrase: relates to
Cardinality: zero, one, or many
Child Entity: ORGANIZATION-ORDER-LINE

Parent Entity: ORGANIZATION
Verb Phrase: sends
Cardinality: zero, one, or many
Child Entity: MATERIEL-SUSPENSION-NOTICE

Parent Entity: ORGANIZATION
Verb Phrase: takes
Cardinality: zero, one, or many
Child Entity: MATERIEL-SUSPENSION-ACTION

Parent Entity: ORGANIZATION
Verb Phrase: accountable for
Cardinality: zero, one, or many
Child Entity: ORGANIZATION-MATERIEL

Parent Entity: ORGANIZATION
Verb Phrase: acts as
Cardinality: zero, one, or many
Child Entity: MATERIEL-SUSPENSION-ORGANIZATION

Parent Entity: ORGANIZATION
Verb Phrase: acts as
Cardinality: zero, one, or many
Child Entity: ORGANIZATION-IN-TRAINING-COURSE

Parent Entity: ORGANIZATION
Verb Phrase: assigned by mission
Cardinality: zero, one, or many
Child Entity: WRM-PROGRAM

Parent Entity: ORGANIZATION
Verb Phrase: associated with
Cardinality: zero, one, or many
Child Entity: PROGRAM-ORGANIZATION

Parent Entity: ORGANIZATION
Verb Phrase: associated with
Cardinality: zero, one, or many
Child Entity: PROJECT-ORGANIZATION-ASSOC

Parent Entity:	ORGANIZATION
Verb Phrase:	associated with
Cardinality:	zero, one, or many
Child Entity:	TASK-ORGANIZATION
Parent Entity:	ORGANIZATION
Verb Phrase:	authorizes
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-MATERIEL-ASSIGNMENT
Parent Entity:	ORGANIZATION
Verb Phrase:	delivered
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-RECEIPT-WITH-DISCREPANCIES
Parent Entity:	ORGANIZATION
Verb Phrase:	has
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-ORGANIZATION-ASSOC
Parent Entity:	ORGANIZATION
Verb Phrase:	has a requirement for
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-UNIT-ASSEMBLAGE-TYPE
Parent Entity:	ORGANIZATION
Verb Phrase:	is associated with
Cardinality:	zero, one, or many
Child Entity:	FACILITY-ORGANIZATION
Parent Entity:	ORGANIZATION
Verb Phrase:	is associated with
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-SERVICE
Parent Entity:	ORGANIZATION
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-STRUCTURE
Parent Entity:	ORGANIZATION
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-ORDER
Parent Entity:	ORGANIZATION
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-STRUCTURE

Parent Entity:	ORGANIZATION
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	INSTALLATION
Parent Entity:	ORGANIZATION
Verb Phrase:	reports
Cardinality:	zero, one, or many
Child Entity:	MANAGED-MATERIEL-REPORTING-REQUIREMENT
Parent Entity:	ORGANIZATION
Verb Phrase:	requires/links
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-COMMUNICATION-LINK-USAGE
Parent Entity:	ORGANIZATION
Verb Phrase:	uses
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-LOCATION
Parent Entity:	ORGANIZATION-CATEGORY
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION
Parent Entity:	ORGANIZATION-COMMUNICATION-LINK-REASON
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-COMMUNICATION-LINK-USAGE
Parent Entity:	ORGANIZATION-LOCATION-REASON
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-LOCATION
Parent Entity:	ORGANIZATION-MATERIEL
Verb Phrase:	which may be used as
Cardinality:	zero, one, or many
Child Entity:	WRM-PROG-MATERIEL
Parent Entity:	ORGANIZATION-MATERIEL-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-MATERIEL
Parent Entity:	ORGANIZATION-ORDER-LINE-ROLE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-ORDER-LINE

Parent Entity:	ORGANIZATION-ORDER-ROLE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-ORDER
Parent Entity:	ORGANIZATION-STRUCTURE-REASON
Verb Phrase:	justifies
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-STRUCTURE
Parent Entity:	ORGANIZATION-SUSPENSION-ROLE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-SUSPENSION-ORGANIZATION-ASSOC
Parent Entity:	ORGANIZATION-TRAINING-ROLE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-IN-TRAINING-COURSE
Parent Entity:	ORGANIZATION-UNIT-ASSEMBLAGE-TYPE
Verb Phrase:	consists of
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE
Parent Entity:	PLUMBING-SYSTEM-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	PLUMBING-SYSTEM
Parent Entity:	POWER-SOURCE
Verb Phrase:	feeds
Cardinality:	zero, one, or many
Child Entity:	ELECTRICAL-DISTRIBUTION-PANEL
Parent Entity:	POWER-SOURCE-TYPE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	POWER-SOURCE
Parent Entity:	PROGRAM
Verb Phrase:	associated with
Cardinality:	zero, one, or many
Child Entity:	PROGRAM-ORGANIZATION
Parent Entity:	PROGRAM
Verb Phrase:	funded-by
Cardinality:	zero, one, or many
Child Entity:	PROGRAM-FUND-ACCOUNT

Parent Entity:	PROGRAM
Verb Phrase:	implemented via
Cardinality:	zero, one, or many
Child Entity:	PROJECT
Parent Entity:	PROGRAM
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	PROGRAM-STRUCTURE
Parent Entity:	PROGRAM
Verb Phrase:	relates
Cardinality:	zero, one, or many
Child Entity:	PROGRAM-STRUCTURE
Parent Entity:	PROGRAM-FUND-ACCOUNT-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	PROGRAM-FUND-ACCOUNT
Parent Entity:	PROGRAM-ORGANIZATION-REASON
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	PROGRAM-ORGANIZATION
Parent Entity:	PROGRAM-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	PROGRAM
Parent Entity:	PROJECT
Verb Phrase:	associated with
Cardinality:	zero, one, or many
Child Entity:	PROJECT-ORGANIZATION-ASSOC
Parent Entity:	PROJECT
Verb Phrase:	broken into
Cardinality:	zero, one, or many
Child Entity:	TASK
Parent Entity:	PROJECT
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	PROJECT-STRUCTURE
Parent Entity:	PROJECT
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	PROJECT-STRUCTURE

Parent Entity:	PROJECT-ORGANIZATION-REASON
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	PROJECT-ORGANIZATION-ASSOC
Parent Entity:	RECEIPT-OF-GOODS-AND-SERVICES
Verb Phrase:	has
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-RECEIPT-ASSOC
Parent Entity:	ROOM
Verb Phrase:	contains
Cardinality:	one or more
Child Entity:	ROOM-STRUCTURAL-COMPONENT
Parent Entity:	ROOM-STRUCTURAL-COMPONENT
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	UTILITY-RECEPTACLE
Parent Entity:	ROOM-STRUCTURAL-COMPONENT-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	ROOM-STRUCTURAL-COMPONENT
Parent Entity:	SERVICE-CATEGORY
Verb Phrase:	categorizes
Cardinality:	zero, one, or many
Child Entity:	AVAILABLE-SERVICE
Parent Entity:	SERVICE-ORDER-LINE
Verb Phrase:	requires
Cardinality:	zero, one, or many
Child Entity:	SERVICE-ORDER-LINE-TECHNICIAN
Parent Entity:	SERVICE-ORDER-LINE-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	SERVICE-ORDER-LINE
Parent Entity:	SERVICE-SCHEDULE-CATEGORY
Verb Phrase:	categorizes
Cardinality:	zero, one, or many
Child Entity:	AVAILABLE-SERVICE
Parent Entity:	SERVICE-TASK
Verb Phrase:	identifies
Cardinality:	zero, one, or many
Child Entity:	HEALTH-DEVICE-SERVICE-TASK

Parent Entity:	SERVICE-TYPE
Verb Phrase:	categorizes
Cardinality:	zero, one, or many
Child Entity:	AVAILABLE-SERVICE
Parent Entity:	SERVICE-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	HEALTH-DEVICE-SERVICE-TASK
Parent Entity:	SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM
Verb Phrase:	acts as
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-SYSTEM-ITEM
Parent Entity:	SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM
Verb Phrase:	may require
Cardinality:	zero, one, or many
Child Entity:	SINGLY-MANAGED-WORK-ORDER
Parent Entity:	SINGLY-MANAGED-MATERIEL-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM
Parent Entity:	SOURCE-OF-SUPPLY
Verb Phrase:	involved in
Cardinality:	zero, one, or many
Child Entity:	SUPPLY-RESTRICTION
Parent Entity:	STANDARDS-DOCUMENT
Verb Phrase:	acts as
Cardinality:	zero, one, or many
Child Entity:	FACILITY-SYSTEM-CLASS-STDS-DOC
Parent Entity:	STANDARDS-DOCUMENT
Verb Phrase:	acts as
Cardinality:	zero, one, or many
Child Entity:	IDEAL-FACILITY-DOCUMENT
Parent Entity:	STERILE-PACK
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	STERILE-PACK-SUPPLY-MATERIEL
Parent Entity:	STERILE-PACK
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	ASSIGNED-SINGLY-MANAGED-EQUIPMENT-ITEM-IN-STERILE-PACK

Parent Entity:	STERILE-PACK
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	STERILE-PACK-STRUCTURE
Parent Entity:	STERILE-PACK
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	STERILE-PACK-STRUCTURE
Parent Entity:	STERILE-PACK-TYPE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	STERILE-PACK
Parent Entity:	STORAGE-AREA
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	STORAGE-AREA-STRUCTURE
Parent Entity:	STORAGE-AREA
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	STORAGE-AREA-STRUCTURE
Parent Entity:	STORAGE-AREA-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	STORAGE-AREA
Parent Entity:	STRUCTURAL-SYSTEM-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	STRUCTURAL-SYSTEM
Parent Entity:	SUPPLY-MATERIEL
Verb Phrase:	may be used as
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE-SUPPLY-MATERIEL
Parent Entity:	SUPPLY-MATERIEL
Verb Phrase:	used as
Cardinality:	zero, one, or many
Child Entity:	STERILE-PACK-SUPPLY-MATERIEL
Parent Entity:	SUPPLY-RESTRICTION-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	SUPPLY-RESTRICTION

Parent Entity:	SURFACE-CATEGORY
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	IDEAL-ROOM-SURFACE
Parent Entity:	TABLE-OF-ALLOWANCE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE-TYPE
Parent Entity:	TABLE-OF-ALLOWANCE
Verb Phrase:	justifies
Cardinality:	zero, one, or many
Child Entity:	MATERIEL-AUTHORIZATION-REQUEST
Parent Entity:	TABLE-OF-ALLOWANCE
Verb Phrase:	mandates
Cardinality:	zero, one, or many
Child Entity:	TABLE-OF-ALLOWANCE-MATERIEL-REQUIREMENT
Parent Entity:	TASK
Verb Phrase:	involves
Cardinality:	zero, one, or many
Child Entity:	TASK-ORGANIZATION
Parent Entity:	TASK
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	TASK-STRUCTURE
Parent Entity:	TASK
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	TASK-STRUCTURE
Parent Entity:	TASK-ORGANIZATION-REASON
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	TASK-ORGANIZATION
Parent Entity:	TIME-PERIOD-CATEGORY
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	TIME-PERIOD
Parent Entity:	TRAINING-COURSE
Verb Phrase:	involves
Cardinality:	zero, one, or many
Child Entity:	INDIVIDUAL-IN-TRAINING-COURSE

Parent Entity:	TRAINING-COURSE
Verb Phrase:	involves
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-IN-TRAINING-COURSE
Parent Entity:	TRAINING-DELIVERY-METHOD
Verb Phrase:	used for
Cardinality:	zero, one, or many
Child Entity:	TRAINING-COURSE
Parent Entity:	TRAINING-DIFFICULTY-LEVEL
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	INSTRUCTION-PROGRAM
Parent Entity:	UNDATED-SUPPLY-MATERIEL
Verb Phrase:	stored at
Cardinality:	zero, one, or many
Child Entity:	GROUP-MANAGED-UNDATED-MATERIEL-SUPPLY-LOCATION
Parent Entity:	UNDATED-SUPPLY-MATERIEL
Verb Phrase:	stored at
Cardinality:	zero, one, or many
Child Entity:	LOT-MANAGED-UNDATED-SUPPLY-MATERIEL-LOCATION
Parent Entity:	UNIT-ASSEMBLAGE
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE-SUPPLY-MATERIEL
Parent Entity:	UNIT-ASSEMBLAGE
Verb Phrase:	contains
Cardinality:	zero, one, or many
Child Entity:	EQUIPMENT-SYSTEM
Parent Entity:	UNIT-ASSEMBLAGE
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE-STRUCTURE
Parent Entity:	UNIT-ASSEMBLAGE
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE-STRUCTURE
Parent Entity:	UNIT-ASSEMBLAGE
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	SINGLY-MANAGED-MATERIEL-EQUIPMENT-ITEM

Parent Entity:	UNIT-ASSEMBLAGE-TYPE
Verb Phrase:	is related to
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE-TYPE-STRUCTURE
Parent Entity:	UNIT-ASSEMBLAGE-TYPE
Verb Phrase:	relates to
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE-TYPE-STRUCTURE
Parent Entity:	UNIT-ASSEMBLAGE-TYPE
Verb Phrase:	requires
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE-TYPE-MATERIEL-REQUIREMENT
Parent Entity:	UNIT-ASSEMBLAGE-TYPE
Verb Phrase:	supports
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION-UNIT-ASSEMBLAGE-TYPE
Parent Entity:	UNIT-ASSEMBLAGE-VERSION
Verb Phrase:	categorizes
Cardinality:	zero, one, or many
Child Entity:	UNIT-ASSEMBLAGE-TYPE
Parent Entity:	UNIT-TYPE
Verb Phrase:	defines
Cardinality:	zero, one, or many
Child Entity:	ORGANIZATION
Parent Entity:	UTILITY-RECEPTACLE-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	IDEAL-ROOM-RECEPTACLE
Parent Entity:	UTILITY-RECEPTACLE-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	UTILITY-RECEPTACLE
Parent Entity:	VENDOR
Verb Phrase:	offers
Cardinality:	zero, one, or many
Child Entity:	VENDOR-MATERIEL-CATALOG-ITEM
Parent Entity:	VENDOR
Verb Phrase:	sells
Cardinality:	zero, one, or many
Child Entity:	VENDOR-MANUFACTURER-ITEM

Parent Entity:	VOLTAGE-PHASE
Verb Phrase:	describes
Cardinality:	zero, one, or many
Child Entity:	POWER-SOURCE
Parent Entity:	WIRE-TYPE
Verb Phrase:	used in
Cardinality:	zero, one, or many
Child Entity:	ELECTRICAL-CIRCUIT
Parent Entity:	WIRED-COMMUNICATION-LINK
Verb Phrase:	accessed via
Cardinality:	zero, one, or many
Child Entity:	COMMUNICATION-LINK-RECEPTACLE
Parent Entity:	WIRELESS-COMMUNICATION-INSTRUMENT
Verb Phrase:	used in
Cardinality:	zero, one, or many
Child Entity:	WIRELESS-COMMUNICATION-LINK-INSTRUMENT-ASSOC
Parent Entity:	WIRELESS-COMMUNICATION-LINK
Verb Phrase:	used in
Cardinality:	zero, one, or many
Child Entity:	WIRELESS-COMMUNICATION-LINK-INSTRUMENT-ASSOC
Parent Entity:	WORK-ORDER-TYPE
Verb Phrase:	categorizes
Cardinality:	zero, one, or many
Child Entity:	WORK-ORDER
Parent Entity:	WRM-PROG-MATERIEL
Verb Phrase:	may have
Cardinality:	zero, one, or many
Child Entity:	WRM-SINGLY-MANAGED-EQUIPMENT-ITEM
Parent Entity:	WRM-PROGRAM
Verb Phrase:	requires
Cardinality:	one or more
Child Entity:	WRM-PROG-MATERIEL
Parent Entity:	WRM-PROGRAM-TYPE
Verb Phrase:	classifies
Cardinality:	zero, one, or many
Child Entity:	WRM-PROGRAM

4.7 Data Model Derivable Values

Accumulated Maintenance Cost

The accumulated maintenance cost of a specific materiel equipment item. Calculated by adding the cost of all work orders for that item.

Available Days

The total number of days a piece of equipment was fully mission capable. Calculated by adding the days between completion of an unscheduled work order and receipt date of the next unscheduled work order during a period.

Average Number of Days Between Failures

The average number of days between failure or repair of a piece of equipment. Calculated by dividing the total number of available days by the number of unscheduled work orders.

Average Pipeline Time in Days/Order and Ship Time in Days

The average number of elapsed days calculated from the day the order leaves the requesting unit to the day the requested materiel arrives.

Awaiting Manpower

The number of services awaiting manpower that are of a certain age. Calculated by counting all work orders with a receipt date but without a start date and grouping them as follows:

- 0 to 30 days old
- 31 to 60 days old
- 61 to 90 days old
- 91+ days old.

Calibrations Completed

The number of calibrations that were completed during the period. Calculated by adding the number of completed calibration work orders.

Calibrations Received

The number of calibration requests that were received during the period. Calculated by adding the number of all calibration work orders generated.

Completed Scheduled Work Order Percentage

The percent of scheduled services completed for a month. Calculated by adding the number of scheduled work orders with completion dates during the month divided by the number of work orders open during the month.

Consumption Quantity by Month

The quantity of an individual supply item that has been recorded as a recurring issue during a given month.

Current Expenditures

The total expenditures against a given equipment item. Calculated by adding all costs for contracts, labor, and parts for a given equipment item.

Daily Demand Rate

The quantity of recorded recurring demands that are placed each day. It is calculated from the total quantity of recorded demands divided by the number of days over which the quantity of demands occurred.

Date Last Scheduled Work Order

Date the last scheduled work order was completed. Derived from the order line of the last scheduled work order.

Date Last Unscheduled Work Order

Date the last unscheduled work order was completed. Derived from the order line of the last unscheduled work order.

Date Next CAL

The anticipated date when a new calibration work order is expected to be generated for a piece of equipment. Calculated by adding the calibration (CAL) cycle interval to the date of last CAL.

Date Next PM

The anticipated date when a new preventive maintenance work order is expected to be generated for a piece of equipment. Calculated by adding the PM cycle interval to the date of last PM.

Date Next Safety

The anticipated date when a new safety inspection work order is expected to be generated. Calculated by adding the safety interval to the date of last safety inspection.

Demand Frequency by Month

The number of recurring customer order lines for a supply materiel item for each given month.

Demands Filled

The number of recurring order lines for stocked items with the quantity issued equal to the quantity requested.

Demands for Stocked Items

The number of recurring order lines for stocked items.

Due-In Total

The number of due-ins that were created. Calculated by adding the order quantity from all materiel order lines created during the period.

Due-In With High Priority

The number of due-ins that were created with a high priority. Calculated by adding order quantities from materiel order lines with a priority of 1 through 8.

Due-Out Balance

The quantity of an item that has been requested by customers and is not available for issue. Calculated by totaling the quantity fields of all the order lines for the specified catalog item that is in a backorder status.

Equipment Density

The number of items of equipment in use. Calculated by adding the number of group-managed equipment items by group location.

Life Expectancy Remaining

The years of service remaining on an equipment materiel item. Calculated by using the life expectancy in the catalog and subtracting the number of years since the item was placed in service.

Number of Completed Work Orders

The total number of work orders completed. Calculated by adding the number of work orders with a completion date within the period.

Number of Demands

Calculated by adding the number of recurring customer order lines for a supply materiel item.

Number of Modifications

The number of times an item of equipment has been modified in accordance with manufacturer specifications. Calculated by totaling the work orders that have an action code of "Modification" performed.

Projected Date of Retirement

Anticipated date a piece of equipment will be removed from service. Calculated as the date in service plus the life expectancy in years.

Number of Work Orders Waiting for Parts

The total number of work orders with outstanding part order lines.

Number Work Orders Assigned

Total number of work orders assigned to a team or technician. Calculated by adding all work orders assigned to a work center or technician.

Order Line Denials

The number of order lines for which a materiel release was created but for which stock could not be located in full quantity.

Order Ship Time Level

The quantity required during the average pipeline time. Calculated by multiplying daily demand rate by the days in the average pipeline time.

Organizational Not Mission-Capable for Supply (NMCS) Days

The total number of days the equipment was not mission-capable awaiting supply at the organizational level. Calculated by adding the total number of days work orders for a materiel equipment item are open awaiting parts from organizational supply during the period.

Organizational Not Mission-Capable for Maintenance (NMCM) Days

The total number of days the equipment was not mission-capable awaiting maintenance services at the organizational level. Calculated by adding the total number of days work orders for a piece of equipment are open for repair by organizational maintenance during the period.

Outstanding Scheduled Work Order Count

Scheduled work orders that have not been completed. Derived by counting all work order lines that are coded as scheduled and have not been closed.

Outstanding Unscheduled Work Order Count

Unscheduled work orders that have not been completed. Derived by counting all work order lines that are coded as unscheduled and have not been closed.

PM Completed

The number of preventive maintenance services that were completed during the period.

PM Requests Received

The number of preventive maintenance requests that were received during the period.

Possible Days

The total number of days the equipment was on-hand. Calculated by subtracting reporting period date from date placed in service.

Quantity Waiting for Support

The number of items waiting for support maintenance. Computed by adding all work orders waiting for support maintenance.

Reorder Point/Proposed Reorder Point

The point in the stock control level where requisitions are generated. It may be expressed as a quantity ((the number of days in the Safety level plus the number of days in the average pipeline) times the daily demand rate). It may also be expressed as a percentage ((the number of days in the safety level plus the number of days in the average pipeline time) divided by (the number of days in the requisition objective plus the number of days in the safety level plus the number of days in the average pipeline time)).

Reportable Items at Zero Balance

The number of reportable items with an active balance of 0 (zero) or not listed in the stock record file.

Requisition Objective/Proposed Requisition Objective

The quantity of an item that is consumed during a given period. Low dollar annual requirements result in a higher number of days in the requisition objective and high dollar annual requirements result in a lower number of days in the requisition objective. It is calculated by multiplying the number of days in the requisition objective times the daily demand rate.

Stock Control Level/Proposed Stock Control Level

Identifies the actual unit of issue or unit of measure of stock a customer should maintain based on the customer's demands to the supply activity. Calculated by the number of days in the stock control level ((days in the Economic Order Quantity (EOQ) period, plus number of days in the average pipeline, plus number of days in the safety level) times the daily demand rate).

Stocked Items at Zero Balance

The number of stocked items with a zero active balance at the end of the period.

Stratification of Work Orders Awaiting Man-Hours

The number of unassigned work orders open currently in a work center, stratified by age:

- 0 to 30 days old.
- 31 to 60 days old
- 61 to 90 days old
- 91+ days old.

Stratified Awaiting Parts

The number of services awaiting parts, stratified by age. Calculated by adding the work orders awaiting parts with receipt dates that are within the following time periods:

- 0 to 30 days
- 31 to 60 days
- 61 to 90 days
- 91+ days.

Stratified Deferred Work Orders

The number of deferred services. Determined by counting the number of work orders with deferred action code and a receipt date within the following time periods:

- 0 to 30 days
- 31 to 60 days
- 61 to 90 days
- 91 + days.

Stratified Referred Services

The number of referred services work orders stratified by age:

- referred 0 to 30 days old
- referred 31 to 60 days old
- referred 61 to 90 days old
- referred 91+ days old.

Support NMCM Days

The total number of days the equipment was not mission-capable awaiting maintenance at the support level. Calculated by adding the total number of days work orders for a piece of equipment are open for repair at a support-level shop during the period.

Support NMCS Days

The total number of days the equipment was not mission-capable awaiting supply at the support level. Calculated by adding the total number of days work orders for a piece of equipment are open for supply at the support level during the period.

Total Assigned Hours

Total number of hours that have been assigned to the team or technician.

Total by FY Repair Hours

Total hours a given assigned equipment item has been not mission capable awaiting repair. Computed by adding all hours between 1 October and 30 September that a given equipment item has been non-operational for repair during any given year.

Total by FY Parts Cost

Total cost spent on a given equipment item for repair parts. Computed by adding all costs charged to a given equipment item between 1 October and 30 September for repair parts for any given year.

Total by FY Contract Cost

Total contract costs charged against a given equipment item. Computed by adding costs between 1 October and 30 September charged to a given equipment item for contract repairs during any given year.

Total by FY PM Hours

Total PM hours scheduled. Computed by adding all scheduled PM hours between 1 October and 30 September for any given Work Center for any given year.

Total by FY Not Mission-Capable Hours

Total hours a given assigned equipment item has been not mission-capable. Computed by adding all hours between 1 October and 30 September an equipment item has been non-operational for any given year.

Total by FY Not Mission-Capable Days

Total days a given equipment item has been not mission-capable. Computed by adding all days between 1 October and 30 September an equipment item has been non-operational for any given year.

Total by FY Repair Labor Cost

Total costs charged for labor on a given equipment item for repair. Computed by adding all labor costs charged between 1 October and 30 September for a given equipment item for any given year.

Total Calibrations

The total number of times that calibration has been completed on a particular piece of equipment.

Total Completed Calibrations

The total number of scheduled calibration work orders completed during a given time period.

Total Completed Preventive Maintenance

The total number of scheduled preventive maintenance work orders completed during a given time period.

Total Completed Safety Inspections

The total number of scheduled safety inspections completed in a given time period.

Total Cost

The total cost for labor and parts for a given piece of equipment.

Total Labor Cost

The total cost for labor to complete a work order.

Total Number of Repairs

The total number of repairs that have been performed on a particular piece of equipment.

Total Number of Demands

The total number of order lines received during the period.

Total Parts Cost

The total cost for parts to complete a particular work order.

Total Preventive Maintenance

The total number of times preventive maintenance has been completed on a particular piece of equipment.

Total Repair Cost

The total cost of labor and parts for a given work order.

Total Reportable Items

The number of items that were identified as reportable.

Total Safety Inspections

The total number of safety inspections completed on a specific materiel equipment item.

Total Scheduled Calibrations

The total number of calibration hours scheduled during a given time period.

Total Scheduled Preventive Maintenance

The total number of preventive maintenance work orders scheduled during a given time period.

Total Scheduled Safety Inspections

The total number of scheduled safety inspections for a given time period.

Total Stocked Items

The number of demand-supported items.

Unit of Measure Price

The price of the unit of measure. Calculated by dividing the standard unit price by the unit of measure quantity.

Unscheduled Service Requests Received

The number of unscheduled service requests that were received during the period. Calculated by adding the number of unscheduled work orders with a receipt date during the period.

Unscheduled Services Beginning Balance

The number of unscheduled services that had not been completed at the beginning of the period. Calculated by adding the number of unscheduled work orders remaining open from the previous period.

Unscheduled Services Completed

The number of unscheduled services that were completed during the period. Calculated by

Section 5

Business Process Improvement Integration Issues

5.1 Introduction

A key element of the cIM process is identifying business process improvements (BPIs). A "business process" is a set of activities that results in specific products and services required to carry out the mission of the organization. CIM process participants identify business process improvement opportunities whenever a business process or one of its component activities meets at least one of the following criteria:

- Does not add value in carrying out the organization's mission (e.g., an activity may duplicate efforts elsewhere or a report may be produced for which there is no user)
- Is inefficient (e.g., activities that are not using time- and labor-saving technology)
- Uses an inappropriate type or level of resources (e.g., activities that are not cost-effective)
- Is constrained (e.g., by outdated, restrictive regulations)
- Does not optimize business process performance.

Although all business processes should be reviewed and improved regardless of whether they will be supported by automation technology, it is imperative that business processes that will be automated be made efficient and germane to conducting business prior to their automation. Otherwise, the automated system will simply automate inefficient or unnecessary processes.

The Activity Based Costing (ABC) and Data Modeling Workshop participants identified and documented BPIs in Appendix I of their Workshop Final Report.

5.2 Identifying New BPIs

During the TO-BE workshop, the participants identified additional BPIs. These BPIs are indicated with an asterisk next to the number of the BPI on the chart in Appendix B. Participants identified the new BPIs from the following sources:

- They analyzed a number of action items in the pre-cIM draft *Goals, Objectives, and Strategies for Medical Logistics*, Release 3.0 (10 December 1991) to determine if they represented business process improvements not previously cited.
- They drew on their own background knowledge of the subject area while developing and refining the TO-BE model.
- They identified several BPIs as a result of briefings by commercial and Government organizations on state-of-the-art technology and possible applications to business practices. Other presentations enabled the workshop participants to better understand the requirements

of their customers and other organizations with respect to Medical Logistics. A synopsis of the guest presentations and discussions can be found in Appendix A.

Participants refined and analyzed the list of BPIs using the techniques described below.

5.2.1 Ranking BPIs

It was important to analyze the relative payback of implementing each BPI so that implementation planning could take place within the Medical Logistics community in general and, more specifically, on tasks associated with the development of the Defense Medical Logistics Standard Support (DMLSS) system. The analysis yielded a relative ranking of the BPIs.

The following method was used to determine this ranking:

- a. The participants developed a ranking that would help define which BPIs could or should be implemented quickly based on their level of payback. Each BPI was measured against each of five criteria, and an integer metric or "grade" between 0 and 5 was applied to indicate the relative payback in implementing the BPI. A "0" indicated no payback and a "5" indicated high payback.

The criteria for ranking and grading BPIs are as follows:

- (1) The degree to which the BPIs generated a cost reduction (in terms of annual savings); a high cost reduction would suggest greater payback than a small cost reduction, therefore receiving a higher grade.
- (2) The number of years after implementation that would be required to recoup 100 percent of the investment cost to implement the BPI; the fewer the years required to recoup the investment, the greater the impetus to implement the BPI and the higher the grade applied.
- (3) The ease of implementing the BPI, specifically:
 - The amount of regulatory constraint imposed on implementing the BPI; the greater the constraint, the less likely that the BPI could be implemented early, if at all. A high level of constraint received a low grade.
 - The labor required to implement the BPI; the greater the labor required, the less likely immediate implementation could take place. High labor requirements received a low grade.
- (4) The extent to which the BPI would improve customer satisfaction and enhance readiness; the greater the improvement to customer satisfaction and readiness posture, the greater the payback and, therefore, the higher the grade.

- b. Once each BPI received its grade for each of the criteria, the Workshop Facilitation Team determined a composite grade by calculating the average grade applied across the criteria for each BPI. BPIs were reordered according to their composite grade. This reordering from highest to lowest composite grade provided a ranking of the payback upon implementation. Participant consensus supports the concept that individual grades are less important than the relative ranking, i.e., approximately the top one-third should be considered for immediate implementation.

The rank-ordered listing of BPIs, including criteria and composite grades, is presented in Appendix B. Because this listing differs in text and order from the BPIs listed in Appendix I of the Activity Based Costing and Data Modeling Workshop Final Report, two cross-references are provided: Appendix C cross-references the AS-IS Workshop listing to the current listing; Appendix D cross-references the current listing to the AS-IS Workshop listing. These cross-references also indicate where changes have been made to the text of the original list of BPIs.

5.2.2 Mapping BPIs to Goals and Objectives

The participants defined the Medical Logistics community's business goals and objectives during the TO-BE Modeling workshop. The current revised list of BPIs was mapped to these goals and objectives to ensure that:

- Goals and objectives were defined in all areas of the Medical Logistics business where improvements were desired
- BPIs exist in all areas where goals and objectives have been defined.

This analysis confirmed that the set of BPIs was complete. The participants rewrote several BPIs as a result of this analysis. The analysis also helped clarify the goals and objectives of the Medical Logistics community. These Goals and Objectives are listed in Appendix E. Appendix F provides a chart mapping the BPIs to the Goals and Objectives.

5.3 BPIs Requiring Action by Higher Authority

Several BPIs cannot be approved for implementation within Medical Logistics, but require action by higher authority for implementation via policy changes. Those BPIs identified as being outside the control of Medical Logistics were reviewed and analyzed according to the following factors:

- Advantages/disadvantages of implementation
- Barriers to successful implementation
- Cost benefits
- Competitive impact
- Readiness impact
- Resources required to implement
- Time required to implement
- Suggested alternatives.

The participants prepared position papers that documented information relative to each of these areas. These position papers, located in Appendix G, will require further analysis by the DoD and Services.

5.4 Integration of the BPIs Into the TO-BE Models

Because the BPIs represent new initiatives and ways of improving the Medical Logistics business for the future, it was important that the participants discuss each BPI in relation to the TO-BE Data Model and the TO-BE Activity Model. As a result of the discussions, the models were refined and augmented, ensuring that the latest models represent the TO-BE business as defined through the BPIs.

5.4.1 TO-BE Activity Model

The participants' first step in developing the TO-BE Activity Model was to map individual BPIs to specific activities in the AS-IS Activity Model. A table portraying this mapping is located in Appendix H. BPIs are listed in rank order. This chart provides focal points for identifying where to represent new and revised activities in the TO-BE Activity Model. These focal points became the source for many discussions during the development of the TO-BE Activity Model.

5.4.1.1 Standardization and Improvement of Processes

The Army, Navy, and Air Force currently conduct many Medical Logistics activities differently. A number of BPIs outline specific ways to consolidate operations or create one method agreed upon by the Tri-Services. The TO-BE Activity Model represents those agreed-upon methods.

BPIs also outline ways to improve processes. For example, the participants suggested in BPI #8 that annual physical inventories no longer be carried out now that methods supporting forward logistics concepts make them less useful than previously. In BPI #42, the participants identified the need for a master plan for each facility. The implementation of this BPI will result in significant improvement to the facility management and planning process.

5.4.1.2 Use of Improved Technology

Many BPIs recommend improvements to processes through the use of technology, including automating processes and using Bar Code Readers and Radio Frequency technology. Most of these improvements are captured in the TO-BE Activity Model as mechanisms. Implementing these BPIs is expected to significantly improve in the efficiency and accuracy with which Medical Logistics processes are carried out. In addition, customer support will be enhanced.

5.4.2 TO-BE Data Model

5.4.2.1 Mapping BPIs to the AS-IS Data Model

The TO-BE Data Model was also evolved, in part, by applying the BPIs to the AS-IS Data Model. The AS-IS Data Model was refined to reflect the TO-BE business environment.

5.4.2.2 Improvements Over the AS-IS Business

Clarification, Standardization, and Documentation

The process the participants used to define the TO-BE Data Model involved three major steps: (1) clarifying how the Medical Logistics business ought to be carried out; (2) standardizing business rules, relationships, and definitions of data across the three Services once the business in each Service was clearly understood; and (3) documenting the business rules, relationships, and data in the data structures once they were agreed upon.

The participants ensured that flexibility remained in the data model as they clarified and standardized business rules and data across the Tri-Service Medical Logistics business. For example, in certain cases they documented alternative data structures (and associated business rules) so that the needs of managers across the three Services would be met.

The Medical Logistics community will realize a number of benefits because the business rules, relationships, and data have been clarified, standardized, and documented. Some of these benefits include:

- The TO-BE Data Model will become an authoritative document including a detailed understanding of the business rules, relationships, and data of the business.
- Higher commands will be able to compare "apples to apples" across all Service organizations or facilities, once data are defined consistently. Decisions will be based on sound information.
- The business rules should become enforceable across the Medical Logistics community once standardized and documented, particularly when they are incorporated into standard operating procedures and automated systems.
- Training should become easier as Medical Logistics staff move from one facility or organization to another because the standardization and enforcement of business rules and terminology improves consistency of understanding and operation across the business.
- The business will depend less on the institutional memory of key individuals for accuracy and consistency in its operation. The detailed knowledge that has been captured in the TO-BE Data Model in the form of data structures, rules, standard reference values, and relationships can be institutionalized and made available to all.

Many of these benefits are improvement opportunities that have been stated in or required by the current BPIs. The remaining benefits should accrue to the Medical Logistics community as the business rules, relationships, and data become generally available to and used by the business community.

New Ways of Linking Data:

The TO-BE Data Model incorporates a number of improvements over the "AS-IS world" that came about by linking data in new ways. They include, but are not limited to, the following improvements:

- Materiel will be tracked to the sterile pack level. Thus, both customer and logistician will have the capability to track a specific item of materiel to a specific sterile pack.
- Outsource service catalogs will be created that link each available service to the organizations that provide it.
- Supplies used in the operation of equipment will be linked to the specific equipment type and model. For example, if an Electrocardiogram (ECG) machine requires a particular type of paper on which to print its results, the catalog number of the paper will be specified in the materiel catalog item description of the equipment type and model.
- The TO-BE Data Model includes the business rules, relationships, and attributes to support the integration of commercial catalogs into the Medical Logistics catalog system.
- A number of BPIs identified specific training requirements. The TO-BE Data Model incorporates the data and data structures that will support the implementation of the training-related BPIs. In particular, the data model links training for an MTF's staff to the specific equipment types or models for which they received training.

Appendix A

Guest Speaker Synopses

CHCS

Major Peters, USAF, discussed the need for two-way communication between the Composite Health Care System (CHCS) and the Defense Medical Logistics Standard Support (DMLSS) System. Major Peters presented an overview of the CHCS system and discussed the advantages and disadvantages of the modules that make up the CHCS system. Major Peters identified the POSIX gateway as the method for providing the link between the CHCS customers and the Medical Logistics customers. This gateway should become the primary communications link.

DFAS

Russ Plaisance, Assistant Deputy Director, Business Information Management, Defense Finance and Accounting Service (DFAS), gave briefings on the DFAS finance and accounting functional documentation project (cIM Phase III). DFAS provides accounting and financial services for all Department of Defense activities. The main point of the briefing was the need for integration based on standardized and shared data. With the work currently under way in the Medical, Logistics, and Procurement communities, we have an opportunity to address the integration in the analysis phase. Integration of all business area requirements will greatly expand our capability to streamline the Service processes, such as disbursing, and provide improved and timely information for problem solving and decision making. Standard data, captured under sufficient controls at the source, can then serve as reliable information for a variety of functions.

DPSC

Major Minnick, the Defense Personnel Support Center (DPSC) Directorate of Medical Materiel, spoke on electronic business system initiatives. These initiatives are how DPSC sees it will meet the challenges of gaining 80 percent of the DoD medical materiel market, of increasing customer satisfaction, improving competition, and lowering its surcharge. The Electronic Commerce Program is one major initiative to assist DPSC in meeting these challenges. Electronic Commerce has two phases of implementation. Phase I is the electronic transmission of a delivery order from DPSC to the contractor who ships to the depot. The second phase is the electronic transmission of a requisition, converted to a delivery order, from DPSC to the contractor who ships to the requisitioner. Both phases use the American National Standards Institute Protocol (ANSI X.12) communication conventions. As the future business practices of ordering medical materiel are developed the, electronic initiatives of DPSC are important considerations.

FIELD UNIT

LTC Richard Ursone, Director, Readiness Directorate, United States Army Medical Materiel Agency (USAMMA), has previously designed and implemented logistics systems, has been the combat commander of the 47th Medical Supply, Optical, Maintenance Unit in Desert Storm, and is a current user of primarily the Readiness and War Reserve operations of the medical logistics systems at USAMMA. LTC Ursone discussed wartime requirements and their relationships with peacetime operations. His focus was the wartime requirements (volume) which MEDLOG Battalion would

have to accommodate. Several specific recommendations were made that impact the data model and data processes being developed. These requirements include: a method to move a volume of requisitions from one system to another when means of communications are inadequate or unavailable; the ability to input and display supply status received from the supply source; the ability to input and display transportation status from LCA (e.g., TCN number, tail number, depart time, estimated time of arrival, pallet number, text data); the ability to receive materiel easily by bar code wands or some other means; the ability to produce a due out release immediately upon processing a receipt; the ability to build a controlled requisition objective (level) on a supply item based upon estimated demand; and, the automation of the optical fabrication order system.

NURSING

LtCol Betty Jones, Medical Functional Integration Management (MFIM) Organization, represented Nursing Services when briefing the Medical Logistics group. Nursing Services is a primary customer of Medical Logistics and normally consists of all nursing units within the Medical Treatment Facility. LtCol Jones provided the group with an overview of the nursing baseline environment as it is today, and presented improvement opportunities identified by the Nursing Working Group. The primary problem presented was the amount of time Nursing Services expends on other than direct patient care related tasks. LtCol Jones expressed a concern over the misuse or overuse of expensive medical items caused by the nursing staff not being aware of the cost of the items they use. She suggested Medical Logistics provide the nursing units with greater visibility of the prices of items (e.g., labeling bins on exchanger carts with unit costs) to increase cost awareness and decision making in the selection and use of materiel. Other areas which LtCol Jones expressed a desire to improve and enhance include: providing a Medical Logistics person to each of the major patient care functional areas who would serve as an advocate to provide logistics support and increasing communication and accessibility between streamlining the equipment acquisition and accounting processes.

PHARMACY

LCDR Gregory Hall, MSC USN, Associate Director of Pharmacy, National Naval Medical Center, addressed the Working Group from the perspective of a Pharmacist (Active Duty Navy) requiring Logistics support. He identified some deficiencies and recommended areas of improvement. LCDR Hall indicated that the paperwork requirement imposed an administrative burden that could be alleviated by implementing a paperless system. Additionally, he indicated the need for greater price visibility on the products carried in the pharmacy. LCDR Hall also stated that he would like to see an easy method of return for credit, particularly for expired medications. He said that he sees the potential for significant cost avoidance by receiving some credit for expired medications rather than merely discarding them. He briefly discussed the fact that the lead time to receive supplies in overseas locations is far too long, requiring high levels of stock to be maintained on the pharmacy and storeroom shelves. LCDR Hall emphasized the need for more timely interface for information such as new drugs, prices, etc. He further asked for more complete and easy-to-use catalogs. LCDR Hall completed his presentation by indicating the National Naval Medical Center pharmacy has six pharmacy personnel performing supply functions (e.g., order, receive, inventory) and would like to see some relief so that their time could be spent on pharmacy functions.

LMI

Mr. Don Egan, Sr. Research Fellow Logistics Management Institute (LMI), is in charge of the modernization of defense logistics (MODELS) at LMI, as well as the development of DoD's Electronic Data Interchange (EDI) protocol submissions to the ANSI X.12 Technical Standards Committee. Mr. Egan presented an overview of basic EDI concepts and their potential benefits.

Mr. Roger Miller, Logistics Management Institute, summarized the cataloging issues resulting from the symposium for Medical Logistics managers on May 3 through 7, 1993.

Miles Pharmaceuticals

Mr. Frank Gallo, Miles Pharmaceuticals, presented a briefing outlining the broad changes in manufacturing and distribution practices in the civilian medical industry. Mr. Gallow also related examples of problems in Federal purchasing practices and suggested improvements that could enhance effectiveness for Government and industry.

George Washington University

Dr. Jim Perry, George Washington University, presented eight or nine emerging concepts in distribution (e.g., moving inventory up the supply chain, EDI partnerships) in a 2-hour presentation that contained examples of places where new concepts have been successfully implemented.

Wang Laboratories

Mr. Andy Flick, Mr. Bob White, and Mr. Wendell Hughes of Wang Laboratories, Dayton, OH, presented information regarding the prototype they are building for Wright-Patterson AFB called Pro-Log-Med (prototype logistics medical). The Wang team discussed the objectives and purpose of the system, and how it relates to current legacy systems.

Wright-Patterson Group

A group of representatives from Wright-Patterson AFB discussed the Logistics Application of the Automated Marking and Reading Symbols (LOGMARS) Program. LOGMARS was established to develop a standard bar coding technology and to coordinate, direct, develop, and implement this technology within the Air Force. The major concerns of LOGMARS are data capture including bar coding and other symbologies for data capture, identification technology using radio frequency tracking and transmission, and the handling of automation systems information including carousel systems and other automated distribution systems. The following list presents the representatives' names and topics:

- Mr. Ramirez and Mr. Palomaki, Overview Briefing of LOGMARS
- Mr. Dembeck, 2-D Bar Code
- Mr. Berger, Automated System for Tracking and Accessing Records
- Major Payne, Emergency Medical Personnel Record System (EMPRS)

- LT COL Robillard, Pathology
- Capt Beatty, Medical Logistics

FDA

Mr. Kerry Rothchilds, a representative of the Food and Drug Administration Center for Devices, wrote the regulation for the implementation of the Safe Medical Device Act. Mr. Rothchilds discussed the "Safe Medical Device Act": what it is, what it entails, its ramifications on the medical community, and its implementation.

Appendix B

BPI Criteria Rating in Rank Order

The following matrix presents the BPI criteria rating in rank order. Please note under "Criteria/Grade", 3 is the average of 3a and 3b, and "Average of columns" is the average of 1, 2, 3, and 4.

	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
Improvement Opportunity	4	4	3	3	3	5	4.00
	1. <u>Unofficial Inventory Recapture</u> O&M funds are used to finance unknown quantities of unofficial inventory. This practice impairs the ability to identify true need for official inventories. Unofficial inventories can be nearly eliminated by managing most supply assets up to the point of consumption.						
	2	4	4	4	4	5	3.75
	*2. <u>Contracting Warrants</u> Formalize procedures for providing contracting warrants to medical logistics personnel so health care contracting positions are established within medical logistics.						

* BPI created during TO-BE workshop

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
3. <u>Automated Requisition</u> Currently customer requisitions or issue requests are manually generated. These requests are individually received and processed by logistics personnel. These processes involve duplicate creation of data and are labor intensive, error prone, and time consuming. These processes should be automated to reduce labor, provide better customer support, and save time.	2	4	3.5	4	3	5	3.63
4. <u>Automated EDI for Contracted Services</u> The current DoD and Service procedures for contracting, purchasing, and making financial payments require extensive manual labor resulting in a long Processing and Administrative Lead Time (PALT), excessive paper work, and delayed bill payment. Delayed payments result in high interest penalties, and long lead time results in excessive inventories. The Services should review private sector applications of Electronic Data Exchange (EDI) and where applicable to the DoD, should implement them.	4	3	2	2	2	5	3.50
5. <u>Consolidated Medical Logistics Field Office</u> The three Services independently operate component-level (USAMMA, AFMLO, Navy Medical Logistics Command (NMLC)) logistics offices to oversee geographic areas. Greater economies could be realized by consolidating Medical Logistics functions in Tri-Service offices.	4	3	2	2	2	4	3.25

* BPI created during TO-BE workshop

Improvement Opportunity		Criteria/Grade						
		1	2	3	3a	3b	4	5
		Generate Cost Reduction	Reoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
<p>*6. Critical Items List</p> <p>Currently materiel managers manage a list of materiel items considered critical for the organization. The need exists for users (wards, clinics, pharmacy, etc.) to be able to identify or flag items that are critical to them. Current legacy systems are not capable of allowing the customer to develop such a list that is specific to the customer's needs. Materiel managers could be more effective and responsive if the supply system used knew which items were critical for each customer's operation.</p>		2	4	3	2	4	4	3.25
<p>7. Consolidated Excess Property Program</p> <p>The three Services run separate excess property programs within the medical communities. These programs should be combined to allow for better reutilization of excess resources. Consolidate all excess programs under one office and publish a central list to all Services.</p>		2	4	3	2	4	4	3.25

* BPI created during TO-BE workshop

Improvement Opportunity		Criteria/Grade						
		1	2	3	3a	3b	4	5
		Generate Cost Reduction	Recover Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
<p>*8. <u>Eliminate Annual Inventory Requirements</u></p> <p>Each year a complete inventory of storeroom items must be conducted. This is a labor-intensive, costly, and disruptive process. The average time to conduct a complete store-room inventory is 1 to two weeks. During the inventory period, the storeroom is closed to customers who must stockpile required supplies to compensate for this time, and considerable expenses are dedicated to the inventory process (i.e., wages, utilities, administrative support). Requirements for an annual inventory should be eliminated or revised. If eliminated, periodic spot checks should be conducted to sample inventory accuracy. These spot checks could focus on high dollar value inventory items (price x quantity) freeing logistics personnel from labor-intensive counting activities. Small quantities in customer supply closets/carts or in the medical supply warehouse should not have to be inventoried other than during normal operations.</p>		2	4	3.5	2	5	3	3.13

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
<p>9. <u>Improvement and Inclusion of Existing Automated Systems and Integration</u></p> <p>There are several automated systems employed in Medical Logistics that operate independently and do not interface with other systems. This results in duplication of efforts, additional training for multiple systems, and multiple work stations for related functions. There should be a single system that fully integrates all automation for Medical Logistics. This system software should also be compatible with other internal and external systems (e.g., Composite Health Care System (CHCS), Medical Office Automation (MED-OA)). Existing automated systems offer little on-line help. Training programs focus primarily on operating these systems versus the real functions of Medical Logistics. Future automated systems should have on-line help and built in tutorials so that training can be focused on Medical Logistics functions.</p>	5	1	1.5	2	1	5	3.13
<p>10. <u>Automated Technical Library</u></p> <p>Currently every command must stock its own library with product information at a considerable cost. There needs to be a central data bank of information for customers to use. This data bank would include specifications, technical literature, clinical lessons learned, and product comparisons. This information is currently available on CD-ROM and should be made accessible via modem from a central source.</p>	3	3	2.5	2	3	4	3.13

* BPI created during TO-BE workshop

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
11. Automated Frustrated Shipment Tracking Items that need to be returned to the original source are currently not resolved in a timely manner. This creates items being stored awaiting disposition. Due to this delay, financial inaccuracies may be created, and customer service may be impaired. Automated follow-up procedures for return of goods should be developed to eliminate delays.	2	4	3.5	4	3	3	3.13
12. Automated Building Operations Management Current building operation programs (e.g., preventive maintenance, utilities, communication systems) are not managed consistently at the local level. Many programs are manually tracked and filed. This creates a duplication of effort and inconsistent procedures. In addition, requirements are often not identified in a timely and consistent manner. An automated system would assist in tracking and identifying requirements, increase consistency within the program, and ensure accurate record keeping.	2	4	2.5	2	3	4	3.13

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
<p>*13. <u>Acquisition of Additional Space for Managed Care Facilities</u></p> <p>Develop corporate methodology and pipeline for ease of gaining space quickly. The current process for acquiring space to support coordinated care is not responsive. Options for other than building include: leased space, temporary buildings, and using swing space (e.g., timesharing) for flexibility.</p>	4	3	1.5	1	2	4	3.13
<p>*14. <u>Local "Partnership" Procurement Agreements</u></p> <p>Many items and services required for the operation of a health care facility are not centrally managed (i.e., depot stocked, prime vendor items). In order to reduce costs and enhance responsiveness, "partnership" agreements should be established with local or area civilian buying groups for the acquisition of these items and services. Agreements should include items normally negotiated for member hospitals with the provision to "expeditiously" add items.</p>	3	3	3.5	3	4	3	3.13

* BPI created during TO-BE workshop

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of 7 Columns
15. Automated Inventory Management and Materiel Handling The majority of existing storage and distribution functions operate without contemporary material handling technology (e.g., conveyance systems, automated carousels, optical scanners, and bar code readers). This practice is labor-intensive and prohibits implementation of Just-in-Time (JIT) supply support to the end user. Organizations should employ modern material handling technologies with the implementation schedule tied to return on investment. Future standard systems must be designed to integrate effectively with these material handling technologies.	5	1	2	3	1	4	3.00
*16. Social Issues Legislative acts have increased the cost of delivering the military medical logistics commodity. Some of these are: the small business set-aside, the Buy American Act, and mandatory wage requirements. If the military medical logistics activity is to operate as current civilian practices dictate, relief of these legislative acts must occur.	3	4	1	1	1	4	3.00

* BPI created during TO-BE workshop

Improvement Opportunity	Criteria/Grade					
	1	2	3	3a	3b	4
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness
<p>*17. Termination of Stockfund Operations at Army and Navy Medical Treatment Facilities</p> <p>The existing stockfund systems used by the Army and Navy are obsolete and do not promote use of new business practices (e.g., Prime Vendor, Dedicated Truck, Just-in-Time inventory). Essentially, the current practices are labor and overhead cost-intensive, cumbersome, redundant, facilitate an environment of permissable stocking in excess of actual needs, and add no value to the Medical Logistics process. The systems require separate funds management processes when one funding source can be used efficiently. Terminating of the current operations is the optimal solution. This will immediately return significant manpower and facility resources to the facilities as well as reduce existing inventories to acceptable levels.</p>	4	2	3	3	3	3
<p>18. Standard CBA</p> <p>The current method of generating a Cost Benefit Analysis (CBA) is inconsistent, time-consuming, and labor intensive. Standard models with electronic templates should be developed to facilitate completion of a CBA for selected acquisitions.</p>	2	2	2.5	2	3	5
						Average of Columns
						3.00
						2.88

* BPI created during TO-BE workshop

	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
Improvement Opportunity *19. Receipt for Work Payment for maintenance and repair to Civil Engineers or Department of Public Works are often not verifiable due to incomplete tracking of tasks completed. A Standardized Work Receipt given to the facility management department showing task performed, man- hours needed, and labor rates would allow for accurate tracking and payments.	1	4	2.5	2	3	4	2.88
20. Standard Corporate Facility Inventory and Condition Assessment There is no corporate facility inventory or condition assessment model, which results in inefficient distribution of resources. Develop and implement standard reporting procedures for facility inventory and condition assessment.	4	1	2.5	2	3	4	2.88
21. TPF for Acquiring Equipment Methods for acquiring individual equipment, equipment systems (packages), or outfitting of construction projects are currently not coordinated or integrated with financial, facility, or other support organizations. The idea of Total Package Fielding (TPF) uses an integrated approach to fielding equipment systems and their support and maintenance requirements. Develop methods to support the idea of TPF for all equipment acquisitions to include status, funding, procurement requirements and follow-on requirements for maintenance, training, and installation.	1	4	2.5	2	3	4	2.88

* BPI created during TO-BE workshop

Improvement Opportunity

		Criteria/Grade						
		1	2	3	3a	3b	4	5
		Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
22. <u>Cross Sharing of Standard Contract Shells</u> Local activities create service contract specifications that may exist at other locations. This is a time-consuming and manpower-intensive effort. Create a central repository that contains the requirements for a variety of service and contractual needs. Templates of standard criteria for contract performance should be developed and used by all Services.		2	3	2.5	2	3	4	2.88
23. <u>Inventory Management Technology</u> (a) DoD should issue a policy eliminating the Army's accounting requirement for furniture with a unit price of \$300 and above. The Air Force and Navy do not have this requirement. (b) DoD should issue a policy to establish standard marking and inventory technology for all the Services. One possibility could be the use of Radio Frequency (RF) tags. The Air Force is currently testing this procedure to determine feasibility. RF tags would allow logistics personnel to determine where a piece of equipment is at any given time without having to physically locate the item.		3	2	2.5	3	2	4	2.88

* BPI created during TO-BE workshop

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
24. <u>Automated Standard Facility Operational Programs</u> Current facility operational programs (e.g., safety, life safety, waste management, physical security) are not managed consistently at the local level. Many programs are manually tracked and filed. This creates a duplication of effort and inconsistent procedures. An automated system would reduce the level of manpower required and increase consistency within the programs.	2	3	2.5	2	3	4	2.88
25. <u>Better Personnel Resource Management</u> Identify skills required by facility and those personnel having these skills. Personnel often receive specialized training and are assigned where there is no requirement for this training.	2	3	2.5	2	3	4	2.88
26. <u>Training With Equipment Procurement</u> DoD should issue a policy stating that all purchase requests for equipment include technical documentation and training for operators and/or maintenance personnel. A standard statement should also be used in the contractual documents when training is not required.	1	2	3	2	4	5	2.75

* BPI created during TO-BE workshop

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recover Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
27. <u>Automated Material Management Receipt</u> The present receiving process is very labor intensive. An effective state-of-the-art automation system will streamline reconciliation of shipping manifest with received products, provide access to due-in records and, facilitate immediate release of due-outs.	2	3	2	2	2	4	2.75
28. <u>Navy Backorder Policy</u> The Navy does not routinely backorder stocked supplies to their customers. If they can not fill a request from existing stock, the customer is notified, but has to keep reordering the item until it is finally released. The Navy should backorder the item to keep the customer from having to submit repetitive orders and use the backorder quantity to identify requirements.	1	1	4	4	4	5	2.75

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
29. <u>Standard COTR Training</u> As Contracting Officer Technical Representatives (COTRs) are assigned at the local level, they are advised of their responsibilities through various means. These means include local or centralized training at the Service level and may be formal or informal. This results in many inconsistencies in the performance of COTR duties. Standard COTR training packages should be developed and made available to all Services.	1	3	2.5	2	3	4	2.63
30. <u>On-line Central Repository Lessons Learned</u> Currently no standard methodology exists to develop lessons learned based on post occupancy evaluations for new construction. Additionally, each Service independently collects and maintains records of lessons learned. This results in the potential to repeat mistakes as a result of not having these data available. There should be an automated central repository of data available to obtain information on post-occupancy evaluations.	3	1	2.5	2	3	4	2.63

* BPI created during TO-BE workshop

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
31. <u>Risk Based Preventive Maintenance</u> Preventive maintenance currently requires excessive man hours to complete. By implementing risk based preventive maintenance a significant savings can be realized. This will reduce the total number of man hours required for preventive maintenance allowing assets to be redistributed to the maintenance side of the house thereby reducing the number of maintenance contracts required. The Navy has already implemented this program in compliance with JCAHO.	2	3	2.5	3	2	3	2.63
32. <u>Improve Customer Service</u> Changes sometimes occur during the procurement process which adversely impact the ability to satisfy customer needs. Current acquisition status should be available on line to the customer. This would allow more timely changes to be made during the acquisition process.	1	1	2.5	2	3	5	2.38
33. <u>Develop Life-Cycle Facility Strategy</u> The life cycle management of facilities for real property maintenance activities, is structured such that only critical or emergency requirements are resolved. A corporate strategy for acquisition of a facility must advocate the maintenance and repair requirements through the life of the facility.	2	1	2.5	2	3	4	2.38

* BPI created during TO-BE workshop

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
34. Continuous QA Survey of Customers Currently there are no standard criteria or method for effectively measuring how well an organization serves the customers needs. A standard system of data collection and analysis should be developed and implemented by the Medical Logistics community. This system should document customers' perceptions, provide analysis, feedback, and make recommendations for appropriate adjustments.	1	1	3.5	3	4	4	2.38
35. Automate Procurement History Currently, the procurement history and alternate sources of supply are not readily identifiable. This puts an additional workload on the customer and logistics personnel. Information systems should allow for procurement history to be recorded. This history should include previous sources and prices.	1	1	3.5	4	3	4	2.38

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recover Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
<p>*36. <u>Consolidate Biomedical Training and Standardize</u></p> <p>Biomedical equipment maintenance training for the Tri-Services is accomplished at two locations. The Army/Navy and Air Force training curriculum differ greatly. Utilizing the best methodology and curriculum from the Tri-Services, combining and standardizing training will provide for a higher level of in-house support. Reducing outsourced service contract costs, and potentially minimizing the need for specialized manufacturers training could be realized.</p>	3	1	1.5	2	1	4	2.38
<p>37. <u>Establish Standard Electronic Templates</u></p> <p>Medical Logistics has a requirement to collect data as input to periodic reports. Often, the data is not readily available or not gathered in a format consistent with report formats. Establish standard electronic templates of reports linked to integrated databases. Under this procedure as databases are updated, real time reports would be available, and could be forwarded electronically as needed.</p>	1	2	3	3	3	3	2.25

* BPI created during TO-BE workshop

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
38. <u>Establish Facility Management Training and Recruiting Program</u> There are not enough trained personnel within the facility management arena. This creates inefficient planning and asset distribution. Establish an aggressive campaign to recruit, train, and retain personnel with engineering backgrounds to help plan and manage the facility assets.	2	1	2	2	2	4	2.25
39. <u>Consolidate Electronic Forms Management</u> Different Service-unique forms are often used for the same purpose. This creates unnecessary costs and duplication of effort in maintaining, procuring, and stocking forms. In addition, this hinders inter-Service operational effectiveness. This is especially critical during joint exercises and contingencies. Standardization of all forms would eliminate these problems. Furthermore, these forms should be available on an electronic template.	2	1	2	2	2	4	2.25
40. <u>Integrated Customer Support</u> Customers must go to different sources within the logistics organization to acquire information, resources, and support. The logistics system needs to provide an integrated interface to the customer and clearly defined points of contact for customer service.	1	1	3	3	3	4	2.25

* BPI created during TO-BE workshop

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
*41. <u>Medical Logistics Training</u> Review and integrate Tri-Service occupational skill requirements for medical logistics personnel to meet mission requirements. Develop standardized training programs from this occupational skill review.	2	1	1.5	2	1	4	2.13
*42. <u>Facility Master Plan</u> All operations and programs at the facility level should be coordinated and scheduled. A standardized program for developing a Facility Master Plan, established for all Services by DoD and carried out by local facility management planners, would provide complete and effective management of medical facilities. The Air Force currently uses a similar system.	1	1	2.5	2	3	4	2.13
*43. <u>Return for Credit Program</u> Improve and standardize methods Medical Logistics uses to accomplish/process returns for credit from commercial vendors for excess materiel. This will expand the use of credit return programs offered by vendors.	2	1	2.5	2	3	3	2.13

* BPI created during TO-BE workshop

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Redresses	Average of Columns
44. <u>Customer Support Guide</u> A comprehensive standard procedures guide is needed to help customers obtain logistics support. This guide should be available in a user-friendly electronic format.	1	1	2.5	2	3	4	2.13
45. <u>Improve Corporate Maintenance Awareness to Increase Funds</u> Currently the DoD spends insufficient funds for facilities maintenance and repair. The industry standard is between two to four percent of the replacement value of facilities. By not appropriating an adequate amount for maintenance and repair, large backlogs are created. Inadequate maintenance reduces the life expectancy of the facility and results in substandard facilities. A concerted effort must be made to develop an awareness of the significant costs associated with improperly maintained facilities such that increased appropriations are authorized.	0	1	3	2	4	4	2.00

* BPI created during TO-BE workshop.

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
46. <u>Improve and Standardize Asset Accounting and Visibility</u> Services' implementation of property accounting and maintenance requirements criteria for medical materiel are inconsistent. This results in duplicate or incomplete databases, thereby not allowing total asset visibility. Incomplete data records may result in increased medical legal liability. In addition, extensive manpower is needed to maintain and reconcile duplicate databases. Standard accounting and maintenance business rules and data structures need to be adopted in order to eliminate these problems.	1	1	3	3	3	3	2.00
47. <u>User-Friendly Interface</u> Logistics customers are required to be familiar with a broad set of logistics unique terminology and codes to communicate their needs and receive status of current requisitions. As a result, customers spend a large amount of time translating their needs into proper logistics terminology. A customer interface should be established which allows for standard English phrases instead of logistics unique codes and terms.	0	1	2	2	2	5	2.00

* BPI created during TO-BE workshop

Improvement Opportunity	Criteria/Grade					
	1	2	3	3a	3b	4
	5	Average of Columns				
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Reliability
	2	2	2	2	2	2
48. <u>Establish Video-Conferencing Capabilities</u> A large amount of time and money is spent by Service personnel on temporary duty to accomplish face-to-face meetings. In many instances, the meetings and exchange of information could be accomplished with video-conferencing capabilities. This technology is already in use at larger facilities. The use of this technology should be expanded to smaller facilities where economically feasible and appropriate.						2.00
49. <u>Automate Suspended Item List</u> Management of suspended items is labor intensive and prone to error. Information is created and transferred through paper media through several stages of inspection. To improve timeliness and accuracy, all suspended item lists should be automated. This level of automation comprises electronic communication from the point of origin through all inventory control points including customer inventories.	1	1	3	3	3	3
						2.00

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
50. <u>Automate Financial Management</u> Lack of consolidated financial budget, and obligated data at the operating level hinders current business practice. Customers, logistics personnel, resource managers and administrators should have real-time access to financial data and financial management information.	1	1	1.5	2	1	4	1.88
51. <u>Automate Document Management</u> A large amount of resources is devoted to filing, shipping, storing, and accessing Logistics auditable source documents in paper formats. These activities are extremely inefficient. Paper documents should be replaced with electronic filing media. Once documents have been sent to central repositories, users should be able to access the documents through networks by using appropriate search criteria.	2	1	2	2	2	2	1.75

Improvement Opportunity	Criteria/Grade						
	1	2	3	3a	3b	4	5
	Generate Cost Reduction	Recoup Investment	Ease of Implementation	Regulatory Constraints	Manpower	Customer Support and Readiness	Average of Columns
52. <u>Tri-Service Space/Functional Criteria</u> Currently, only Tri-Service (DoD) space criteria is used in planning for new construction or renovation. There is no consolidated space utilization or functional criteria or resource based space allocation criteria. The result is inefficient space utilization at the local level and misplaced resources at the corporate level. Adopt and maintain resource-based Tri-Service (DoD) space and functional planning criteria.	1	1	1.5	2	1	3	1.63
53. <u>Establish Central Repository Facility</u> There are innumerable regulations and guidelines dictating facility requirements (e.g., Occupational Safety and Health Administration (OSHA), National Fire Protection Agency (NFPA), Uniform Facility Accessibility Standards (UFAS)). Often there is no way to ensure compliance with all applicable regulations and guidelines. Establish a central repository for all facility regulations and guidelines.	0	1	2.5	2	3	3	1.63

Appendix C

Matrix of Original to Current BPIs

Business Process Improvement (BPI) (Original) ¹	New BPI Number ²	Comments
1. Budget and financial management is fragmented. Provide an automated and integrated capability for logistics-related financial management.	50	Rewritten; combined with original #6
2. The required coordinated efforts for TPF are disjointed and do not always assure the requirements are satisfied in an integrated timely manner. This can result in equipment arriving before the facility or accessories necessary to make it operational are available. Authorizations, funding, and procurement processes should be accomplished concurrently and tracked at each level in the process to ensure equipment can be placed in useful service upon receipt.	21	Rewritten; combined with original #18
3. Customers must go to different sources within the logistics organization to acquire information, resources, and support. The logistics system needs to provide an integrated interface to the customer and clearly defined points of contact for customer service.	40	Text unchanged
4. O&M funds are used to finance unknown quantities of unofficial inventory. This practice impairs the ability to identify true need for official inventories. Unofficial inventories can be nearly eliminated by managing most supply assets up to the point of consumption.	1	Text unchanged
5. The Navy does not routinely backorder stocked supplies to their customers. If they can not fill a request from existing stock, the customer is notified, but has to keep reordering the item until it is finally released. The Navy should backorder the item to keep the customer from having to submit repetitive orders and use the backorder quantity to identify requirements.	28	Text unchanged
6. Lack of current financial information makes it hard for customers to manage their budget and risks over obligation of authorized funds. Customer and logistics personnel should have easy access to current financial information.	50	Rewritten; combined with original #1
7. Services' implementation of property accounting and maintenance requirements criteria for durable medical devices are inconsistent. This results in duplicate or incomplete databases, thereby not allowing total asset visibility. Incomplete data records may result in increased medical liability. In addition, extensive manpower is needed to maintain and reconcile duplicate databases. Standard accounting and maintenance business rules and data structures need to be adopted in order to eliminate these problems.	46	Text edited

Business Process Improvement (BPI) (Original) ¹	New BPI Number ²	Comments
8. The Navy does not have a system to identify items which have been suspended at the time of receipt. Since it is possible for shipments to be in transit at the time of a recall, this automated feature provides a method to flag an item for quality assurance inspection before it ever reaches the storage shelves. The procedure used by the other Services should be implemented by the Navy as an added quality control procedure to prevent potentially dangerous materiel from being released to the customer.	49	DELETED; covered under original #10
9. Reconciliation of shipping manifest with received products is a very labor intensive process. Use of appropriate automated technologies will streamline this process. Automated access to due-out information would eliminate stocking of items that should be directly delivered to the customer, thereby enabling a JIT system.	27	Text rewritten
10. Management of suspended items is labor intensive and prone to error. Information is created and transferred through paper media through several stages of inspection. To improve timeliness and accuracy, all suspended item lists should be automated. This level of automation comprises electronic communication from the point of origin through all inventory control points including customer inventories.	49	Text unchanged
11. Items that need to be returned to the original source are currently not resolved in a timely manner. This creates items being stored awaiting disposition. Due to this delay financial inaccuracies may be created, and customer service may be impaired. Automated follow-up procedures for return of goods should be developed to eliminate delays.	11	Text unchanged
12. Currently customer requisitions or issue requests are manually generated. These requests are individually received and processed by logistics personnel. These processes involve duplicate creation of data and are labor intensive, error prone, and time consuming. These process should be automated to reduce labor, provide better customer support, and save time.	3	Text unchanged

Business Process Improvement (BPI) (Original) ¹	New BPI Number ²	Comments
13. The majority of existing storage and distribution functions operate without contemporary material handling technology (e.g., conveyance systems, automated carousels, optical scanners, and bar code readers). This practice is labor intensive and prohibits implementation of JIT supply support to the end user. Organizations should employ modern material handling technologies with the implementation schedule tied to return on investment. Future standard systems must be designed to integrate effectively with these material handling technologies.	15	Text edited
14. The current DoD and Service procedures for contracting, purchasing, and making financial payments require extensive manual labor resulting in a long PALT, excessive paper work, and delayed bill payment. Delayed payments result in high interest penalties, and long lead time results in excessive inventories. The Services should review private sector applications of EDI and where applicable to the DoD should be implemented.	4	Text edited
15. Currently there are no standard criteria or method for effectively measuring how well an organization serves the customers needs. A standard system of data collection and analysis should be developed and implemented by the Medical Logistics community. This system should document customers' perceptions, provide analysis, feedback, and make recommendations for appropriate adjustments.	34	Text unchanged
16. Currently every command must stock their own library with product information at a considerable cost. There needs to be a central data bank of information for customers to use. This data bank would include specifications, technical literature, clinical lessons learned, and product comparisons. This information is currently available on CD-ROM and should be made accessible via modem from a central source.	10	Text unchanged

Business Process Improvement (BPI) (Original)¹	New BPI Number²	Comments
17. Changes sometimes occur during the procurement process which adversely impact the ability to satisfy customer needs. Current acquisition status should be available on line to the customer. This would allow more timely changes to be made during the acquisition process.	32	Text unchanged
18. At the corporate level funding for facility renovation to support equipment acquisition is funded from a separate account. The persons responsible for the funding tend not to marry up the funding requirements and equipment is ordered that the facility may not be able to accommodate. Have the corporate management level marry up all equipment funding request with facility requests.	21	Rewritten; combined with original #2
19. When equipment items are procured, provisions are sometimes not made for operator and maintenance staff training. By incorporating the training into the procurement document, free or reduced cost training may be provided by the vendor.	26	Text rewritten
20. There needs to be a comprehensive standard procedures guide to assist customers in obtaining logistics support. This guide should be available in a user friendly electronic format.	44	Text unchanged
21. Equipment maintenance, inventory, and property accounting records do not interface and are maintained by different systems, thereby creating duplication of effort. These systems should interface to share like information and eliminate duplicate data entry.	46	DELETED. Covered by original #7
22. The Services are required to monitor all property in excess of \$300. This is a manual and very time consuming process resulting in inventory inaccuracies. This process could be improved by instituting the use of RF tags which would automate inventory updates and tracking.	23	Text rewritten

Business Process Improvement (BPI) (Original) ¹	New BPI Number ²	Comments
23. Different forms are often used for the same purpose. This creates unnecessary costs and duplication of effort in maintaining, procuring, and stocking forms. In addition this hinders interservice operational effectiveness. This is especially critical during joint exercises and contingencies. Standardization of all forms would eliminate these problems. Furthermore these forms should be available on an electronic template.	39	Text edited
24. Preventive maintenance currently requires excessive man hours to complete. By implementing risk based preventive maintenance a significant savings can be realized. This will reduce the total number of man hours required for preventive maintenance allowing assets to be redistributed to the maintenance side of the house thereby reducing the number of maintenance contracts required. The Navy has already implemented this program in compliance with JCAHO.	31	Text unchanged
25. Repair parts sometimes cannot be acquired in a timely manner due to acquisition delays. This creates an increase in equipment down time. The services should authorize the repair facilities to place orders against decentralized blanket purchase agreements (DBPAs), local BPAs, and the use of credit cards.	-	DELETED
26. Training opportunities for medical repair personnel may be limited due to the local commands' reluctance to release funds when the tour of duty may not provide a payback during the present assignment. This restricts the ability of medical repair personnel to deliver the highest quality maintenance. Training funds for medical repair personnel should be centralized to ensure training opportunities based on the needs of the Service.	25	Rewritten; combined with original #27

Business Process Improvement (BPI) (Original) ¹	New BPI Number ²	Comments
27. Personnel often receive specialized training and are assigned where there is no requirement for this training. At times there is a personnel authorization for specialized training which goes unfilled. Due to the inconsistencies in relating training to assignments full benefits of training are not being realized. Efforts should be made to assign personnel with requisite skills to facilities having unique requirements. Assignment personnel need to review personnel training records prior to making assignments	25	Rewritten; combined with original #26
28. The three Services run separate excess property programs. These programs should be combined to allow for better reutilization of excess resources. Consolidate all excess programs under one office and publish a central list to all Services.	7	Text edited
29. Currently the DoD spends insufficient funds for facilities maintenance and repair. The industry standard is between two to four percent of the replacement value of facilities. By not appropriating an adequate amount for maintenance and repair, large backlogs are created. Inadequate maintenance reduces the life expectancy of the facility and results in substandard facilities. A concerted effort must be made to develop an awareness of the significant costs associated with improperly maintained facilities such that increased appropriations are authorized.	45	Text unchanged
30. Currently there is not a standard methodology to develop lessons learned based on post occupancy evaluations for new construction. Additionally, each service independently collects and maintains records of lessons learned. This results in the potential to repeat mistakes as a result of not having this data available. There should be an automated central repository of data available to obtain information on post occupancy evaluations.	30	Text unchanged

Business Process Improvement (BPI) (Original) ¹	New BPI Number ²	Comments
31. The three Services independently operate regional field offices to coordinate local facility requirements. This creates a duplication of efforts by understaffed offices. Greater economies could be realized by consolidating regional facility planning functions with a regional health planning office under the DoD auspices.	5	Text rewritten
32. Each facility collects building, operation, and medical information for facility requirements in a nonstandard manner. This leads to information being lost, uncoordinated, or misinterpreted as review occurs at higher levels. A standard facility information and reporting system should be developed and implemented.	12	DELETED. Covered by original #39
33. Local activities create service contract specifications that may exist at other locations. This is a time consuming and manpower intensive effort. Create a central repository that contains the requirements for a variety of service and contractual needs. Templates of standard criteria for contract performance should be developed and used by all Services.	22	Text unchanged
34. There are not enough trained personnel within the facility management arena. This creates inefficient planning and asset distribution. Establish an aggressive campaign to recruit, train, and retain personnel with engineering backgrounds to help plan and manage the facility assets.	38	Text unchanged
35. The life cycle management of facilities for real property maintenance activities, is structured such that only critical or emergency requirements are resolved. A corporate strategy for acquisition of a facility must advocate the maintenance and repair requirements through the life of the facility.	33	Text unchanged
36. There is no corporate facility inventory or condition assessment model which results in inefficient distribution of resources. Develop and implement standard reporting procedures for facility inventory and condition assessment.	20	Text unchanged

Business Process Improvement (BPI) (Original) ¹	New BPI Number ²	Comments
37. Current facility operational programs (e.g., safety, life safety, waste management, physical security) are not managed consistently at the local level. Many programs are manually tracked and filed. This creates a duplication of effort and inconsistent procedures. An automated system would reduce the level of manpower required and increase consistency within the programs.	24	Text unchanged
38. There are innumerable regulations and guidelines dictating facility requirements (e.g., Occupational Safety and Health Administration (OSHA), National Fire Protection Agency (NFPA), Uniform Facility Accessibility Standards (UFAS)). Often there is no way to ensure compliance with all applicable regulations and guidelines. Establish a central repository for all facility regulations and guidelines.	53	Text unchanged
39. Current building operation programs (e.g., preventive maintenance, utilities, communication systems) are not managed consistently at the local level. Many programs are manually tracked and filed. This creates a duplication of effort and inconsistent procedures. In addition, requirements are often not identified in a timely and consistent manner. An automated system would assist in tracking and identifying requirements, increase consistency within the program, and ensure accurate record keeping.	12	Text unchanged
40. Maintain facilities commensurate with the readiness mission that it supports; and to deliver an economically prudent range of healthcare services. Many activities maintain old, outdated facilities. These facilities are often larger than necessary and are seldom configured or equipped to provide efficient services. The status quo has allowed the facility capability or even the staffing to remain constant while the demand is fluctuating due to changes in demographics and technological advances. There should be a periodic review and analysis to determine the best economic solution and a business plan established to optimally meet the military mission and the healthcare market.	-	DELETED

Business Process Improvement (BPI) (Original) ¹	New BPI Number ²	Comments
41. Currently all three Services maintain unique space and functional criteria. This is a duplication of effort to maintain and update individual criteria. Adopt and maintain Tri-Service standards that prescribe space and functional requirements.	52	Rewritten; combined with original #42
42. Space utilization is assigned within an MTF according to many factors such as mission requirements, functionality, political persuasion, and resources available. This results in inefficient space allocation. Space allocation should incorporate productivity comparisons to verify space is used most effectively.	52	Rewritten; combined with original #41
43. Medical Logistics has a requirement to collect data as input to periodic reports. Often, the data is not readily available or not gathered in a format consistent with report formats. Establish standard electronic templates of reports linked to integrated databases. Under this procedure as databases are updated, real time reports would be available, and could be forwarded electronically as needed.	37	Text unchanged
44. There are several automated systems employed in Medical Logistics that operate independently and do not interface with other systems. This results in duplication of efforts, additional training for multiple systems, and multiple work stations for related functions. There should be a single system that fully integrates all automation for Medical Logistics. This system software should also be compatible with other systems (e.g., Composite Health Care System (CHCS), Medical Office Automation (MED-OA)).	9	Text edited
45. Logistics customers are required to be familiar with a broad set of logistics unique terminology and codes to communicate their needs and receive status of current requisitions. As a result, customers spend a large amount of time translating their needs into proper logistics terminology. A customer interface should be established which allows for standard English phrases instead of logistics unique codes and terms.	47	Text unchanged

Business Process Improvement (BPI) (Original) ¹	New BPI Number ²	Comments
46. A large amount of time and money is spent by Service personnel on temporary duty to accomplish face to face meetings. In many instances, the meetings and exchange of information could be accomplished with teleconferencing capabilities. This technology is already in use at larger facilities. The use of this technology should be expanded to smaller facilities where economically feasible and appropriate.	48	Text edited
47. Logistics data is entered on many different forms and in many different information systems. Data entry is not centralized which results in redundant data entry. Integrated databases should be established to standardize data entry and eliminate redundant processes.	9	DELETED; covered by original #44
48. There are a large amount of resources devoted to shipping, storing, and accessing logistics publications and documents in paper formats. These activities are extremely inefficient. Paper documents and publications should be placed and indexed in an electronic filing system at central locations. Users could access disks as needed through networks by using appropriate search criteria.	51	Text edited
49. As Contracting Officer Technical Representatives (COTRs) are assigned at the local level, they are advised of their responsibilities through various means. These ways include local or centralized training at the service level and may be formal or informal. This results in many inconsistencies in the performance of COTR duties. Standard COTR training packages should be developed and made available to all services.	29	Text edited
50. Existing automated systems offer little on-line help. Training programs focus primarily on operating these systems versus the real functions of Medical Logistics. Future automated systems should have on-line help and built in tutorials so that training can be focused on Medical Logistics functions.	9	Combined with original #44

Business Process Improvement (BPI) (Original) ¹	New BPI Number ²	Comments
51. Currently, the procurement history and alternate sources of supply are not readily identifiable. This puts an additional workload on the customer and logistics personnel. Information systems should allow for procurement history to be recorded. This history should include previous sources and prices.	35	Text unchanged
52. The current method of generating a CBA is inconsistent, time consuming, and labor intensive. Standard models with electronic templates should be developed to facilitate completion of a CBA for selected equipment acquisitions.	18	Text edited

¹ As listed in *Medical Logistics Functional Integration Management Activity Based Costing and Data Modeling Workshop Final Report, Volume 1, Appendix 1.*

² As listed in *Medical Logistics Functional Integration Management Activity Based Costing and Data Modeling Workshop Final Report, Volume 1, Appendix C.*

This Page Intentionally Left Blank

Appendix D **Matrix of Current¹ to Original² BPIs**

New BPI Number	Old BPI Number	New BPI Number	Old BPI Number
1	4	27	9
2	*	28	5
3	12	29	49
4	14	30	30
5	31	31	24
6	*	32	17
7	28	33	35
8	*	34	15
9	44, 47, 50	35	51
10	16	36	*
11	11	37	43
12	32, 39	38	34
13	*	39	23
14	*	40	3
15	13	41	*
16	*	42	*
17	*	43	*
18	52	44	20
19	*	45	29
20	36	46	7, 21
21	2, 18	47	45
22	33	48	46
23	22	49	10
24	37	50	1,6
25	26, 27	51	48
26	19	52	41, 42
		53	38

* This BPI was identified during the TO-BE Workshop and therefore has no previous BPI number associated with it.

¹ As listed in *Medical Logistics Functional Integration Management Activity Based Costing and Data Modeling Workshop Final Report, Volume I, Appendix C.*

² As listed in *Medical Logistics Functional Integration Management Activity Based Costing and Data Modeling Workshop Final Report, Volume I, Appendix I.*

This Page Intentionally Left Blank

Appendix E

Goals and Objectives

Medical Logistics supports the MHSS mission by providing timely resources to enhance health care delivery in peacetime and promote wartime readiness and sustainability. The mission of health care logistics is to provide support at the most reasonable cost to meet the mission objective of sustaining a total quality force.

The workshop participants recommended goals for the Medical Logistics Community. These goals directly support its mission. Performance measure(s) were described for each goal. The following criteria were established as performance measures: objectives must be obtainable, can be achieved within a specified time frame, and have a metric that could be measured. During the course of the workshop, the participants developed several possible objectives. Further analysis revealed that some of the objectives did not meet the criteria and they were subsequently deleted. The refined list of goals and objectives is provided below.

GOAL 1. PROVIDE MEDICAL LOGISTICS SUPPORT TO CUSTOMERS IN A MORE RESPONSIVE, EFFECTIVE, EFFICIENT, AND TIMELY MANNER.

Objective 1.1 Improve availability for routinely used items, while lowering overall costs.

Performance Measures: The following will be reviewed monthly:

- Maintain the percentage of routinely used items managed by MTF Medical Logistics at 95 percent.
- Maintain a record for every consumable item required for use by customers for measuring the gross availability of materiel order lines.
- Reduce Order Ship Time (OST) and overhead invested in pipeline from 30 days to 4 days in Continental United States (CONUS) and 7 days overseas.
- Increase availability of supplies to customers so that 95 percent of stocked items are available within 24 hours, and 98 percent of all items are available within 4 days CONUS and 7 days Outside Continental United States (OCONUS).
- Ninety percent of requests for commercially available items new to the MTF will be available on established contracts or agreements.

Objective 1.2 Reduce the time from the receipt of customer's request to issue of materiel.

Performance Measures:

- Monthly measure the customer's administrative lead time to ensure 95 percent of stocked items are available within 24 hours, and 98 percent of all items are available within 4 days CONUS and 7 days OCONUS.

Objective 1.3

Increase effectiveness and efficiencies in providing medical materiel readiness to support contingency/joint/combined operations.

Performance Measures:

- Monthly measure the required authorized expendable items versus the expendable items that are on hand ensuring the percentage remains above 90 percent.

Objective 1.4

Decrease inventory levels.

Performance Measures: Monthly measure the following:

- Reduce to 0 the dollar value of excess.
- Reduce to 0 the dollar value of destructions of materiel.
- Reduce to less than 2 weeks of inventory.

Objective 1.5

Decrease use of hard copy forms, reports, and documents.

Performance Measures:

- Annually review for a reduction of 70 percent of currently used forms, reports, and documents.

Objective 1.6

Develop programs that support forward logistics.

Performance Measures:

- Decrease the amount of time customers spend on logistics activities by 50 percent per year.

Objective 1.7

Provide continuous improvement in customer support.

Performance Measures:

- Provide an instrument that consistently measures the customers' perceptions of logistics support provided. Analyze the results of this customer input on a regular basis.

GOAL 2. PROVIDE A COMPREHENSIVE TECHNOLOGY MANAGEMENT PROGRAM THAT SYSTEMATICALLY OPTIMIZES SAFETY, EFFECTIVENESS, AVAILABILITY, EFFICIENCY, AND ECONOMY OF ASSETS REQUIRED BY CUSTOMERS.

Objective 2.1 Streamline and improve requirements identification within the medical equipment authorization process.

Performance Measures:

- For 98 percent of equipment approaching life expectancy or beyond within the next Fiscal Year (FY), provide to each department a listing of equipment with a current condition code, service history including parts and labor costs, and recommendation for replacement.

Objective 2.2 Improve the medical equipment acquisition process.

Performance Measures:

- Reduce negative audit findings.
- Decrease Procurement Administrative Lead Time (PALT) by 50 percent.

Objective 2.3 Shorten the funding process time for equipment acquisition.

Performance Measures:

- Authorized, unfunded requirements under \$1 million are funded within 1 year, after the authorization is approved.

Objective 2.4 Decrease equipment downtime.

Performance Measures:

- That equipment downtime be measured and recorded for each unscheduled servicing. This should be measured from the opening and closing date and time of the appropriate work order.
- That 80 percent of all Risk Level 1 equipment unscheduled servicing be completed within 36 hours.

Objective 2.5 Reduce operator errors.

Performance Measures:

- Reduce operator errors to within 5 percent of total units or less than two units per make and model a month.

- That all operator errors be recorded for individual equipment items, class, make, model, department, and time period (usually 1 month) by units and/or percentage. Training will be provided and annotated on all operator errors.
- That these monthly totals be tracked for at least 12 months to show trends.
- That the effects of any measures, (e.g., training), taken to correct failure cause relationships, (e.g., operator error, misuse, no problem found) of quality control indicators be tracked.

Objective 2.6

Decrease the number of reported incidents of safety violations (for Medical Maintenance an incident shall be a scheduled failed safety check).

Performance Measures:

- Reduce the number of failed safety checks to less than 5 percent of total scheduled checks per month.
- That all failed safety checks be recorded for individual equipment items, class, make, model, department, and time period (usually 1 month) by units and/or percentage.
- That these monthly totals be tracked for at least 12 months to show trends.
- That the effects of any measures (e.g., increased inspections or training) required to correct safety incidents be tracked.
- Provide regular "walk through" safety inspections on the wards and clinics to observe personnel safety practices.

Objective 2.7

Reduce cost of maintaining equipment

Performance Measures:

- Reduce the cost of maintaining equipment to less than 5 percent of acquisition costs.
- That all costs (labor and material) associated with individual equipment items, class, make, and model be recorded by fiscal year.
- That the effects of any measures (e.g., increased inspections, training, alternate parts vendors) to decrease service costs be tracked by fiscal year to indicate trends.
- Acquire training for the purpose of reducing service contracts, thereby increasing in-house maintenance capabilities.

Objective 2.8

Achieve 100% asset visibility at all corporate levels.

Performance Measures:

- 98% of accountable assets will be physically identified with Bar Codes.
- Generic identification of equipment will follow industry standards (ECRIs Health Device codes).
- No equipment will be held accountable that is valued less than \$1,000 (initial acquisition cost), unless required for risk.

Objective 2.9

Improve scheduling of preventive maintenance. That preventive maintenance be differentiated from safety inspections and performance checks and scheduled based upon reliability centered maintenance (RCM).

Performance Measures:

- That equipment trouble calls be tracked by individual equipment items, class, make and model be recorded monthly to indicate the results of scheduling before and after of RCM.
- Schedule preventive maintenance to occur "around" peak patient load times. This may be accomplished by scheduling a periodic swing or night shift.

Objective 2.10

Improve manpower utilization.

Performance Measures:

- That at least 70 percent of each service technician's time be accounted.
- That time be accounted for by scheduled inspections, incomplete inspections, incoming inspections, no problem found, operator errors, clinical support, administrative support, technical support, unscheduled work, and non-professional activities. That this breakdown should be evaluated by the supervisor to ensure at least 70 percent of recorded time be devoted to medical maintenance issues.
- That at least 50 percent of each service technician's workload be commensurate with his/her skill level per month. This can be accomplished by assigning technicians and equipment to different skill levels or teams and recording monthly work assignments and time necessary to complete work.

GOAL 3. IMPROVE THE PROCESS OF ACQUIRING OUTSOURCED PRODUCTS/SERVICES FOR THE CUSTOMER

Objective 3.1 Improve the responsiveness, effectiveness, and efficiency of personal and non-personal operations contracts.

Performance Measures:

- Reduce Procurement Administrative Lead Time (PALT) to award contract. PALT is measured from time of receipt of a validated and funded customer requirement by Contracting to time of contract award.
- Personal and non-personal service contracts. For contracts over \$25,000. Reduce PALT from the current 6-8 months to 2-3 months for 90 percent of contract requests.
- Products contracts over \$25,000. Reduce PALT from the current 3-4 months to 1-2 months for 90 percent of contract requests.
- Decreased turnaround time from identification of requirements for service contract to contract start up and modifications.
- Decrease the time spent from requirement identification to submission of a funded and validated customer requirement to Contracting from the current 1-2 months to less than 1 month for 95 percent of all contract requests.
- Decrease the time spent in contract start up from the current 1-2 months to less than 1 month for 95 percent of awarded service contracts.
- Increased expertise of individuals who monitor contract compliance.
- All individuals assigned as COTRS/CORS to contracts will have satisfactorily completed a COTR/COR training course.
- All individuals assigned as COTRS/CORS will have in their possession a letter of assignment from the contracting officer that delineates specific duties and responsibilities related to the contract/s.

Objective 3.2 Decrease the administrative cost of providing contract services.

Performance Measures:

- Reduction of the cost per transaction will be reviewed semiannually.

GOAL 4. IMPROVE THE PROCESS OF ACQUIRING AND MANAGING FACILITY ASSETS FOR THE CUSTOMER.

Objective 4.1 Integrate information used in equipment acquisition and facility maintenance activities with the construction process.

Performance Measures:

- Reduce number of change orders to 23 percent of program authorization.

Objective 4.2 Develop a comprehensive safety management program designed to provide a physical environment free of hazards.

Performance Measures:

- Reduce number of accidents reported per quarter.
- Reduce number of fire safety violations reported per quarter.
- Reduce number of safety violations reported per quarter.
- No JCAHO accreditation contingencies related to the facility.
- Facility meets National Fire Prevention Agency (NFPA) 101, Life Safety Code; if not, have a plan of correction.
- No life/safety maintenance repair work orders over 5 days old.

Objective 4.3 Develop a facilities management program designed to ensure a facility's operational reliability, assess its special risks, and respond to failures including environmental and utility systems that support the patient care environment.

Performance Measures:

- Respond and repair within 4 hours or less.
- Achieve zero JCAHO accreditation contingencies related to utilities management.

Objective 4.4 Ensure medical facilities meet the functional requirements for providing health care; provide a healthy, professional work environment for the staff; and instill confidence in patients and visitors.

Performance Measures:

- Reduce time for approval and completion of minor construction and renovation not to exceed 6 months.

- Reduce facility-related complaints to less than three monthly.
- Reduce the number of hospital-acquired infections to fewer than one per year.

Objective 4.5 Improve system to define requirements in support of budget development.

Performance Measures:

- Increase allocation for maintenance and repair to 2 percent-4 percent of current replacement values annually.

Objective 4.6 Ensure that a sufficient number of qualified personnel fill facility management positions.

Performance Measures:

- Facility management personnel should represent 11 percent of the manpower standard for Medical Logistics annually
- Ninety-five percent of facility management job descriptions represent the total responsibilities assigned annually.

GOAL 5. PROVIDE STANDARDIZED, MORE ECONOMICAL, AND EFFECTIVE MEDICAL LOGISTICS TRAINING PROGRAM TO IMPROVE CUSTOMER SUPPORT.

Objective 5.1 Increase efficiency of training.

Performance Measures:

- Reduce cost per training event on a year to year basis.
- Reduce cost per pupil on a year to year basis

Objective 5.2 Improve the effectiveness (capacity to produce the desired result) of the training program.

Performance Measures:

- Increase the percentage of training material taught as compared to mission requirements
- Each training program will develop and self administer instruments to measure effectiveness. Training effectiveness will improve on a year to year basis. Training instruments and measurements obtained will be retained for 3 years and will be made available for review during annual inspections.

Objective 5.3 Develop standardized Tri-Service Medical Logistics training program.

Performance Measures:

- Obtain 100 percent attendance at the Tri-Service MLTP by the Biomedical repair persons entering each Service (on a yearly basis)
- Increase percentage of trained personnel assigned to medical logistics positions

Objective 5.4 Make training more readily available.

Performance Measures:

- Increase percent of medical logistics personnel enrolled in training programs (i.e., video training, on-line training, interactive) on a yearly basis.

This Page Intentionally Left Blank

Appendix F

BPIs Mapped to Goals and Objectives

An integral part of this workshop was the development of ideas that would improve the Medical Logistics business environment. These suggestions, Business Process Improvements (BPIs), are defined and ranked in Appendix B. To ensure their appropriateness to the Medical Logistics community, each of the BPIs was mapped to the recommended Goals and Objectives found in Appendix E. In every case, at least one objective related to an individual BPI. Some BPI's, however, were found to support several goals and objectives.

Table F-1. BPIs Mapped to Goals and Objectives.

Objectives BPIs	Goal 1										Goal 2										Goal 3					Goal 4					Goal 5				
	1.1	1.2	1.3	1.4	1.6	1.8	1.7	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2	4.1	4.2	4.3	4.4	4.5	4.6	5.1	5.2	5.3	5.4						
1																																			
2																																			
3																																			
4																																			
5																																			
6																																			
7																																			
8																																			
9																																			
10																																			
11																																			
12																																			
13																																			
14																																			
15																																			
16																																			
17																																			
18																																			
19																																			
20																																			
21																																			
22																																			
23																																			
24																																			
25																																			
26																																			
27																																			
28																																			
29																																			
30																																			
31																																			
32																																			
33																																			
34																																			
35																																			
36																																			
37																																			
38																																			
39																																			
40																																			
41																																			

Appendix G

BPI Position Papers

During this workshop, the participants reviewed and recommended for approval 53 possible Business Process Improvements (BPIs). These BPIs are in rank order in Appendix B. An analysis by the participants identified several of the BPIs that were outside the Medical Logistics community's ability to implement, therefore requiring some other activity to implement them. The Medical Logistics Program, Office of Medical Functional Integration Management (MFIM), requested the workshop provide copies of these BPIs. MFIM also provided a specific format for these documents.

The BPIs presented in this appendix are listed as Follows:

- Contracting Warrants (BPI 2)
- Consolidated Medical Logistics Field Office (BPI 5)
- Consolidated Excess Property (BPI 7)
- Eliminate Annual Inventory Requirements (BPI 8)
- Acquisition of Additional Space for Managed Care Facilities (BPI 13)
- Local "Partnership" Procurement Agreements (BPI 14)
- Social Issues (BPI 16)
- Termination of Stockfund Operations at Army and Navy Medical Treatment Facilities (BPI 17)
- Inventory Management Technology (BPI 23-A)
- Inventory Management Technology (BPI 23-B)
- Better Personnel Resource Management (BPI 25)
- Training With Equipment Procurement (BPI 26)
- Automated Materiel Management Receipt (BPI 27)
- Standard COTR Training (BPI 29)
- On-Line Central Repository of Lessons Learned (BPI 30)
- Consolidate Electronic Form Management (BPI 39)
- Integrated Customer Support (BPI 40)
- Medical Logistics Training (BPI 41)
- Facility Master Plan (BPI 42)
- Customer Support Guide (BPI 44)
- Establish Video-Conferencing Capabilities (BPI 48)
- Automate Document Management (BPI 51).

CONTRACTING WARRANTS (BPI 2)

Formalize procedures for providing contracting warrants to medical logistics personnel so health care contracting positions are established within medical logistics.

Advantages

- Establishes a standard methodology across DoD for acquiring credit cards and establishing contracting warrants.
- Increases customer support and confidence in medical logistics.
- Streamlines the procurement/walk-through process.
- Reduces overall inventory requirements for non-routine critical items.
- Reduces labor for base contracting personnel.

Disadvantages

- Possible abuse of credit cards.
- Contracting might shift routine procurement activities to medical logistics without additional staffing and training.
- Increases the need for training medical logistics personnel to ensure compliance with the FAR and other contracting guidelines.

Barriers to Implementation

- DoD procurement agency may resist such definitive guidance to a base level activity.
- Base procurement may not like its local authority usurped .

Cost Benefits

May realize cost savings by reducing labor, inventory, and the steps in the procurement process.

Competition Impact

None.

Readiness Impact

Rapid procurement for unplanned contingencies.

Relative Resources

- Minimal effort by procurement to implement this suggestion.
- Training funds and quotas for installation personnel.

Estimated Timing

Within 3-6 months for staff approval; 1 year to fully implement.

Suggested Alternatives and Why

- Maintain the status-quo.
- Prime vendor to fill emergency requirements.

CONSOLIDATED MEDICAL LOGISTICS FIELD OFFICE (BPI 5)

The three Services independently operate component-level (USAMMA, AFMLO, NMLC) logistics offices to oversee Logistics Operations. Greater economies could be realized by consolidating Medical Logistics Functions in Tri-Service offices.

Advantages

- Increases standardization of procedures.
- Decreases cost of management overhead.

Disadvantages

Too much standardization may result in loss of individual Service requirements to support various unique missions.

Barriers

- Reluctance of Services to relinquish control of their individual programs.
- Excessive time lags due to inability of Services to reach consensus over procedures affecting all Services.

Cost Benefit

- Reduces manpower required to implement and monitor similar functions.
- Reduces office space, supply, and system requirements.

Competitive Impact

Unknown.

Readiness Impact

Increases the ability to interact between Services during contingencies.

Relative Resources

Resources are already in existence.

Estimated Timing

One to 3 years.

Suggested Alternatives and Why

Maintain separate offices but require mandatory cross-sharing of information. This alternative would be time consuming and less inclined to support standardization.

CONSOLIDATED EXCESS PROPERTY PROGRAM (BPI 7)

The three Services run separate excess property programs within the Medical communities. These programs should be combined to allow for better reutilization of excess resources. Consolidate all excess programs under one office and publish a central list to all Services.

Advantages

- Reduces management overhead.
- Increases accessibility through consolidating information.
- Allows better use of excess equipment.

Disadvantages

None.

Barriers to Implementation

- Determining which one of the component-level logistics offices would be responsible.
- Reluctance of Services to relinquish control of their excess program.

Cost Benefit

Implementation could potentially provide DoD with significant savings by increasing asset visibility and reutilization throughout the Services.

Competition Impact

Unknown.

Readiness Impact

Some improvement in readiness through better use of serviceable excess.

Relative Resources

Within existing resources.

Estimated Timing

Three to 6 months.

Suggested Alternatives and Why

None.

ELIMINATE ANNUAL INVENTORY REQUIREMENTS (BPI 8)

Each year a complete inventory of storeroom items must be conducted. This is a labor-intensive, costly, and disruptive process. The average time to conduct a complete storeroom inventory is 1 to 2 weeks. During the inventory period, the storeroom is closed to customers who must stockpile required supplies to compensate for this time, and considerable expenses are dedicated to the inventory process (i.e., wages, overtime, utilities, administrative support).

Requirements for an annual inventory should be eliminated or revised. Periodic spot checks could be conducted to sample inventory accuracy. These spot checks could focus on high dollar value inventory items (price X quantity) freeing logistics personnel from labor-intensive counting activities. Small quantities in customer supply closets/carts or in the medical supply warehouse should not have to be inventoried other than during routine operations.

Advantages

- Reduces interruption in customer support.
- Decreases logistics personnel time spent in the inventory process (counting, recounting, causative researching, reconciling, etc.).
- Retains inventory requirement but only on high dollar value items.

Disadvantages

Low dollar value items will not be inventoried on an annual basis.

Barriers

None.

Cost Benefits

Realizes significant savings in manpower now dedicated to the inventory process.

Competitive Impact

None.

Readiness Impact

None.

Relative Resources

Resources currently available will be used more effectively and use of overtime manpower utilization will be reduced.

Estimated Timing

Six to 8 months to staff and coordinate policy changes; additional 4 months to implement.

Suggested Alternatives and Why

None.

ACQUISITION OF ADDITIONAL SPACE FOR MANAGED CARE FACILITIES (BPI 13)

Develop corporate methodology and pipeline for ease of gaining space quickly. The current process for acquisition of space to support coordinated care is not responsive. Options for other than building include: leased space, temporary buildings, and using swing space (e.g., timesharing) for flexibility.

Advantages

- Reduces the lead time for acquiring necessary facilities.
- Reduces the costs associated with implementing new Managed Care programs.
- Standardizes the process by which needed facilities are acquired.
- Improves the responsiveness of the facilities manager in supporting new medical programs.
- Bypasses the usual, stovepipe acquisition process, resulting in a more responsive procurement action.

Disadvantages

- Relies on reports to keep interested parties informed.
- May be difficult to create corporate methodology for acquiring space in a form that efficiently responds to the wide range of medical facilities requirements.

Barriers to Implementation

- Some procurement officials may be left out of the process.
- Requires changes in the current procurement system that relies on series of analyses and approvals by numerous offices and agencies.
- Limited acquisition authority of Medical Logistics personnel.

Cost Benefits

Reduces overall costs of implementing programs and Services related to Managed Care.

Competitive Impact

Unknown.

Readiness Impact

None.

Relative Resources

Resources already exist. Execution of BPI would improve efficiency of existing resources.

Estimated Timing

May require 1 to 3 years or more to modify existing regulatory guidance pertaining to the acquisition of facilities.

Suggested Alternatives and Why

The three Services can continue to use an uncoordinated stovepipe procurement system. This will perpetuate the status quo and squander time and other resources.

LOCAL "PARTNERSHIP" PROCUREMENT AGREEMENTS (BPI 14)

Many items and services required for the operation of a health care facility are not centrally managed (i.e., depot stocked, prime vendor items). In order to reduce costs and enhance responsiveness, "partnership" agreements should be established with local or area civilian buying groups for the acquisition of these items and services. Agreements should include items normally negotiated for member hospitals with the provision to "expeditiously" add items.

Advantages

- **Maximizes** DoD's ability to achieve advantageous prices. Through the proactive participation of all DoD health care facilities (as a group) from one geographic area (i.e., metropolitan DC area, San Antonio area).
- **Speeds up** procurement, if agreement is in place.
- **Enables** use of quality, proven sources of supply at lowest delivered cost.
- **Reduces** in-house inventories.
- **Allows** sharing of Services between the member organizations.

Disadvantages

Extensive coordination will be required in each geographic area to review DoD's current participation, and devise a plan to allow DoD facilities to participate in partnership agreements.

Barriers

- **DFAR** and the requirement to use mandatory sources of supply may restrict our ability to agree to buy (i.e., "lock-in") from the partnership supplier for the partnership agreement period.
- **DFAR** requirement to compete each open market acquisition over \$2,500 may interdict potential to expedite procurement with partnership agreements.

Cost Benefits

- **Reduces** pipeline reduced procurement time plus reduced delivery time.
- **Provides** another source with lowest delivered cost.

Competitive Impact

May facilitate an increase in sharing of Service capabilities among the DoD community, e.g., shared maintenance services may reduce need for maintenance contracts.

Readiness Impact

Very little readiness impact.

Relative Resources

Low: 2 or 3 man-months per geographic area.

Estimated Timing

May be implemented in less than 1 year per geographical region.

Suggested Alternatives and Why

None offered.

Other Facts

Any action taken should include a Defense Federal Acquisition Regulation (DFAR) review to ensure post/ base-level activities can freely enter into partnership agreements. A policy statement can be issued to provide appropriate guidance to each health care facility.

SOCIAL ISSUES (BPI 16)

Legislative acts have increased the cost of delivering the military medical logistics commodity. Some of these are: small business set-aside, Buy American act, and mandatory wage requirements. If the military medical logistics activity is to operate as current civilian practices dictate, relief from these legislative acts must occur.

Advantages

- **Realizes savings by buying from vendors who may not be included in the Buy American Act.**
- **Reduces the costs the Government will pay for goods and services. Mandatory Wage requirements specify wages a small business owner must pay his employees.**

Disadvantages

- **May realize cost savings because often purchasing goods and services from mandated "small businesses" is more costly than purchasing from a large business.**
- **May be denied goods from foreign supplies sympathizing with opposing interests during wartime, if we depend upon foreign vendors for supplies, we need a dependable supply source in the time of war;**
- **Buying only from large businesses could create an unfair monopoly and adversely affect small businesses. The U.S. Government should encourage the growth and development of small businesses.**

Barriers to Implementation

- **The FAR mandates the preference towards the American small business. It would be extremely difficult to exclude DoD from the current Federal procurement regulations.**
- **Small businesses employing American citizens depend upon the small business preference to engage in commerce with the U.S. Government.**
- **Not maintaining mandatory wage and benefit requirements may adversely impact the standard of living of small business employees.**

Cost/Benefit

Unknown.

Competition Impact

Could enhance competition by introducing more suppliers into the acquisition process.

Readiness Impact

Minimal impact.

Relative Resources

No additional resources required.

Estimated Timing

Three to 5 years to enact law.

Three to 5 years to implement regulations after enactment of legislation.

Suggested Alternative and Why

No other alternatives to recommend.

TERMINATION OF STOCKFUND OPERATIONS AT ARMY AND NAVY MEDICAL TREATMENT FACILITIES (BPI 17)

The existing stockfund systems used by the Army and Navy are obsolete and do not promote use of new business practices (e.g., Prime Vendor, Dedicated Truck, Just-in-Time inventory). Essentially, the current practices are labor and overhead cost-intensive, cumbersome, redundant, facilitate an environment of permissible stocking in excess of actual needs, and add no value to the medical logistics process. The systems require separate funds management processes when one funding source can be used efficiently. Termination of the current operations is the optimal solution. This will immediately return significant manpower and facility resources to the facilities as well as reduce existing inventories to acceptable levels.

Advantages

Reduces current resource requirements for managed stocked and non-stocked items, accounting, storing, and materiel movement.

Disadvantages

None.

Barriers

Eliminating the Army and Navy Stockfund Accounts will require the MTF's to better manage the O&M funding as the DBOF funds will no longer be available. This may be resisted by the Financial personnel as this will require closer scrutiny of funds and they will not have the stockfund buffer.

Cost Benefits

A detailed cost analysis has not been done to determine what resources could actually be eliminated or redistributed to other functions within the MTF.

Competitive Impact

None.

Readiness Impact

None.

Relative Resources

None.

Estimated Timing

Six months to staff, and 12 months to implement

Suggested Alternatives and Why

Adopt the Air Force methodology, which operates the stockfund with almost no personnel.

Other Facts

With the implementation of the supporting BPIs, the current apportioned Stockfund concept has become obsolete, wasteful, and more costly. The associated resources to maintain the financial accounts, inventory, Medical Inventory Control System (MICS), warehouses, and other associated functions are no longer required. As 60 to 80 percent of the recurrent demand materials procured from local purchase will be procured from the Prime Vendor alone, there is no reason to continue to maintain this resource-intensive system. It should be noted that existence of the stockfund has not guaranteed an uninterrupted funding stream. In fact, in many instances, inventory procurement has been interrupted by the shortage/absence of stockfund acquisition authority even though operations and maintenance funds were available.

INVENTORY MANAGEMENT TECHNOLOGY (BPI 23-A)

DoD should issue a policy eliminating the Army's accounting requirement furniture with a unit price of \$300 and above. The Air Force and Navy do not have this requirement.

Advantages

- Eliminates confusion of logistics, medical personnel, and customers as to what is an accountable piece of furniture and what is not accountable by creating a standard policy of not accounting for furniture;
- Significantly reduces in hours spent by logistics and clinical personnel in accounting and inventory of furniture.

Disadvantages

Creates the potential for furniture to "disappear" from property/asset accounts of facilities.

Barriers to Implementation

Army DCSLOG may resist deleting accountability for furniture.

Cost Benefit

Realizes cost savings in the reduced of hours spent on establishing accountability by logistics and medical personnel. Savings also will be realized by eliminating significant hours spent by the customers and logistic personnel performing inventories for furniture.

Competition Impact

None.

Readiness Impact

None.

Relative Resources

Will require program in legacy systems to delete furniture records from property books, and staffing of a decision paper to the appropriate channels.

Estimated Timing

Within 3-6 months.

Suggested Alternative and Why

Continue current method, which wastes manpower resources.

INVENTORY MANAGEMENT TECHNOLOGY (BP¹ 23-B)

DoD should issue a policy to establish standard marking and inventory technology for all the Services. One possibility could be the use of Radio Frequency (RF) tags. The Air Force is currently testing this procedure to determine feasibility. RF tags would allow logistics personnel to determine where a piece of equipment is at any given time without having to physically locate the item.

Advantages

- Allows for consistent procedures throughout the Services and for the same equipment to be used at any facility.
- Simplifies locating equipment for maintenance servicing.
- Reduces pilferage and loss by security monitoring.
- Improves inventory accuracy and asset visibility.

Disadvantages

- Could be cost-prohibitive to initially establishment this technology for all three Services.
- Requires changes to legacy systems;
- Potential to inventory removed tags.

Barriers to Implementation

Army and Navy DCSLOG may resist changing from LOGMARS to another inventory technology.

Cost Benefits

- Adoption of RF inventory technology would result in long-term savings as a result of reduced hours spent in physical tracking of equipment.
- Additional advantages include a higher percent of scheduled services performed on hard-to-locate mobile equipment that may eliminate potential hazards.

Competition Impact

None.

Readiness Impact

Radio frequency tags would allow for quick location of equipment needed for deployment.

Unknown as to how RF tags would function during rapid deployment and under extreme environmental conditions.

Relative Resources

- Money to buy new technology for all three Services.
- System developers to incorporate changes.
- Staff personnel for economic analysis and staffing of results and decision papers.

Estimated Timing

Air Force is currently testing technology. Implementation 2-3 years after approval.

Suggested Alternatives and Why

None; continue current method.

BETTER PERSONNEL RESOURCE MANAGEMENT (BPI 25)

Identify skills required by facility and those personnel having these skills.

Personnel often receive specialized training and are assigned where there is no requirement for this training. At times there is a personnel authorization for specialized training that goes unfilled. Due to the inconsistencies in relating training to assignments, full benefits of training are not being realized. Efforts should be made to assign personnel with requisite skills to facilities having unique requirements.

Advantages

- Reduces contract cost by having trained personnel available to service high tech, high cost, and complex medical equipment.
- Increases efficiency or up-time of equipment by having trained personnel on site.
- Increases pride and professionalism of personnel by assigning them to meaningful jobs instead of contracting out equipment beyond the capabilities of the staff.
- Improves timeliness and realizes cost savings by inter-Service sharing of trained personnel when similar equipment types are located at Tri-Service facilities within a geographic area. This was recommended by a recent DoD Inspector General audit finding for Computed Tomography systems.

Disadvantages

- Creates limited billets to which an individual may be assigned due to low density of specific equipment throughout the Services.
- Leads to perceived limited advancement opportunities due to restricted job scope.

Barriers to Implementation

Identifying and maintaining a list of Tri-Service facilities with the specialized equipment requirements and individuals who have received specialty training will be difficult. However, maintaining such a list is essential to assignments personnel when determining assignments.

Cost Benefit

Decreases maintenance contract costs, especially for remote locations (e.g., ships, field activities, and overseas and remote Conus activities).

Competition Impact

Not applicable.

Readiness Impact

It is vital to the medical mission requirements of the Services to provide highly effective and efficient personnel to maintain high tech equipment. During the recent conflict in Kuwait and Iraq, deployment of CT Scanners and Automatic Chemistry Analyzers was attempted. Picture archiving of radiographic exposures was considered for satellite transmission (with probable additional requests for other state-of-the-art, high tech medical equipment). The Services scrambled to find and coordinate training requirements for maintenance personnel to support these forward deployed systems. It would seem to be very cost-effective and prudent to increase our capabilities to support such systems should the need ever arise again.

Relative Resources

Requires funding for specific manufacturers training or to implement training as specialty courses in our BioMedical Equipment Technician (BMET) program.

Estimated Timing

- Six to 12 months for implementation with the detailer.
- Four to 6 months for setting up centralized location to maintain equipment inventory and personnel tracking requirements.
- Four to 6 months to train the designated maintenance individuals to service specific equipment.

Suggested Alternative and Why

Maintain the status quo.

Other Facts

Specialized equipment that should be considered for this program are: CT Scanners, Cardiac Catheterization Labs, Magnetic Resonance Imagery (MRI) units, Lasers, Ultrasound units, Automated Chemistry Analyzers, Anesthesia machines, Volume Ventilators, Ethylene Oxide (ETO) sterilizers, Patient Monitoring systems, Blood Counters, Computers, Nuclear Medicine equipment, X-ray acceptance training, and fiber optics.

TRAINING WITH EQUIPMENT PROCUREMENT (BPI 26)

DoD should issue a policy stating that all purchase requests for equipment include technical documentation and training for operators and/or maintenance personnel. A standard statement should also be used in the contractual documents when training is not required.

Advantages

- Ensures that training is always considered with every purchase request.
- Eliminates loss of time required for modification of contracts when technical documentation and/or training has been omitted on the purchase request and is required to operate and maintain equipment.
- Reduces equipment downtime due to inability to correctly operate and maintain equipment.
- Reduces safety violations due to inability to correctly operate and maintain equipment.

Disadvantages

Creates potential for increased procurement costs.

Barriers to Implementation

None.

Cost Benefit

Realizes cost benefits by eliminating or reducing contract modifications, equipment downtime, and safety hazards due to lack of correct training in operating and maintaining the equipment.

Competition Impact

None.

Readiness Impact

Provides personnel trained to correctly and effectively use and properly maintain equipment.

Relative Resources

Staff to submit decision paper through appropriate channels.

Estimated Timing

Within 3-6 months

Suggested Alternatives and Why

Continue current methods.

AUTOMATED MATERIEL MANAGEMENT RECEIPT (BPI 27)

The present receiving process is very labor intensive. An effective state-of-the-art automation system will streamline reconciliation of shipping manifest with received products, provide access to due-in records, and facilitate immediate release of due-outs.

Advantages

- Expedites the receipt process.
- Automatically transfers obligated funds into accounts payable.
- Provides customer items more expeditiously to the customer.

Disadvantages

May increase difficulty of reconciling mismatch between bar code data to physical data if no clear text identification provided on bar code.

Barriers to Implementation

None.

Cost Benefit

The hardware/software cost is minimal compared to benefits gained. Logistics Management Institute (LMI) is currently working this issue.

Competition Impact

None.

Readiness Impact

- Enhances readiness posture by expediting receipt process of mission-ready supplies.
- Achieves Major readiness enhancement in wartime by enabling rapid receipt/issue by medical field units.

Relative Resources

None.

Estimated Timing

One to 6 months with legacy systems; 1 to 5 years with DMLSS.

Suggested Alternatives and Why

No alternative to recommend.

Other Facts

This BPI relates to one of the many functions or processes that is performed in providing medical logistics. Can be implemented by interfacing with existing legacy systems. As DMLSS is developed, materiel receipt automation should be an integral part of the system.

STANDARD COTR TRAINING (BPI 29)

As Contracting Officer Technical Representatives (COTRs) are assigned at the local level, they are advised of their responsibilities through various means. These means include local or centralized training at the Service level and may be formal or informal. This results in many inconsistencies in the performance of COTR duties. Standard COTR training packages should be developed and made available to all Services.

Advantages

- Provides a comprehensive, uniform course of study to train COTR's in all Services. This will help ensure a high standard of competence among the Services.
- As a result of improved COTR functions being performed, allows more uniform contracted services monitoring of and rendering vendor services in conformance with the contract.

Disadvantages

Costs will incur to provide standard COTR training packages.

Barriers to Implementation

- Achieving agreement from the Services to adopt one standard training package.
- Manpower requirements to implement and maintain the curriculum.

Cost Benefit

See advantages.

Competition Impact

None.

Readiness Impact

None.

Relative Resources

- Cost of developing and implementing a standardized training syllabus.
- Manpower requirements to implement and maintain the curriculum.

Estimated Timing

One to 2 years.

Suggested Alternative and Why

Maintain status quo.

ON-LINE CENTRAL REPOSITORY OF LESSONS LEARNED (BPI 30)

Currently no standard methodology EXISTS to develop lessons learned based on post-occupancy evaluations for new construction. Additionally, each Service independently collects and maintains records of lessons learned. This results in the potential to repeat mistakes as a result of not having these data available. There should be an automated central repository of data available to obtain information on post-occupancy evaluations.

Advantages

- Gathers post-occupancy information on all DoD medical construction projects in one location.
- Reduces time spent by facility planners and managers researching past solutions to facility problems.
- Reduces the chance of repeating costly construction or space planning mistakes.
- Encourages DoD-wide improvement of the facility design process by making Service solutions to facility problems available to other Services.

Disadvantages

None.

Barriers

Managing and storing vast amounts of information will require a variety of systems for filing, categorizing, and retrieving data pertinent to a particular project, activity or building type.

Cost Benefits

Reduces costs of new facilities by reducing or eliminating repetitive errors and by promulgating improvements in space utilization.

Competitive Impact

Unknown.

Readiness Impact

Improves readiness by improving a facility's responsiveness to medical needs.

Relative Resources

Unknown.

Estimated Timing

One to 2 years.

Suggested Alternatives and Why

- The three Services can continue to use an uncoordinated, parochial facility evaluation database. This will perpetuate the status quo and continue repetition of mistakes and inefficiencies.
- Continue to collect post-occupancy information at the service level, but share information freely. This alternative would cost less than the proposal above, but the benefits would be fewer.

CONSOLIDATE ELECTRONIC FORM MANAGEMENT (BPI 39)

Different Service-unique forms are often used for the same purpose. This creates unnecessary costs and duplication of effort in maintaining, procuring, and stocking forms. In addition, this hinders in-Service operational effectiveness. This is especially critical during joint exercises and contingencies. Standardization of all forms would eliminate these problems. Furthermore these forms should be available on an electronic template.

Advantages

- Realizes tremendous savings by eliminating paper, storage, and reproduction requirements.
- Allows one standard customer training package to be assembled since all customer's would use the same forms for ordering supplies, equipment, services, and facility support.
- Enables the elimination of most paper forms.
- Greatly improves the Services ability to interact with each other during joint exercises and contingencies.

Disadvantages

None.

Barriers

- Electronic templates must be compatible with each of the Service's automated systems.
- Component regulations that dictate the use of various forms must be updated to delete forms no longer required and add the standardized forms. This is also true of user's guides at MTF level and training materials used at each Service's schools.

Cost Benefits

Addressed in advantages

Competitive Impact

Unknown

Readiness Impact

Greatly enhanced inter-service operational effectiveness would be achieved through a standard method of communicating and responding to needs.

Relative Resources

A team would have to staff the consolidation of forms. This could easily be accomplished with one representative from each Service. Existing agencies would have to make changes to regulations, directives, and training materials. The Office of the Assistant Secretary of Defense, Health Affairs should be the office of primary responsibility.

Estimated Timing

Two to 5 years.

Suggested Alternatives and why

Maintain status quo.

Other Facts

Most forms should naturally become standardized with the development of DMLSS. As DMLSS is developed, regulations, user's manuals, and training materials will be driven towards change.

INTEGRATED CUSTOMER SUPPORT (BPI 40)

Customers must go to different sources within the logistics organization to acquire information, resources, and support. The logistics system needs to provide an integrated interface to the customer and clearly defined points of contact for customer service.

Advantages

- Provides a customer with one logistics representative who would be responsible for all customer support, reducing customer frustration.
- Increase the time clinical personnel can dedicate to direct patient care.

Disadvantages

May require additional manpower to staff.

Barriers to Implementation

None.

Cost Benefit

Allows customers to spend more time performing their assigned duties by integrating customer support.

Competition Impact

None.

Readiness Impact

None.

Relative Resources

Minimal amount of training to reorganize the customer support function may be required.

Estimated Timing

Within 3-6 months.

Suggested Alternative and Why

None.

MEDICAL LOGISTICS TRAINING (BPI 41)

Review and integrate Tri-Service occupational skill requirements for Medical Logistics personnel to meet mission requirements. Develop standardized training programs from this occupational skill review.

Advantages

- Facilitates personnel assignment by expanding source base for trained medical logisticians.
- Enhances use of the DMLSS system or any standardized DoD medical logistics system.

Disadvantages

- De-emphasizes the unique requirements of each Service.
- Requires funds to establish curriculum.

Barriers to Implementation

Each Service is assigned a different mission. While providing medical logistics is a support function, its execution may vary because of mission diversity.

Cost/Benefit

Derives cost savings from consolidating training programs among the Services.

Readiness Impact

Facilitates sharing of Logistics personnel at different Service sites.

Competition Impact

None.

Relative Resources

None.

Estimated Timing

Three to 5 years.

Suggested Alternatives

- **Maintain status quo.**
- **Identify overlapping training programs and consolidate.**
- **Retain complimentary or Service-unique training programs.**

FACILITY MASTER PLAN (BPI 42)

All operations and programs at the facility level should be coordinated and scheduled. A standardized program for developing a Facility Master Plan, established for all Services by DoD and carried out by local facility management planners, would provide complete and effective management of medical facilities. The Air Force currently uses a similar system.

Advantages

- Standardizes the process by which facility operations are planned and scheduled.
- Improves efficiency of facility management staff by establishing a common basis for long-range planning.
- Reduces scheduling conflicts by considering the entire range of operations and programs during the planning process.
- Improves the responsiveness of the facilities manager in supporting new medical programs and services.

Disadvantages

- May reduce responsiveness to short-term Coordinated Care initiatives.
- May be unresponsive to the various needs of individual facilities.

Barriers

None.

Cost Benefits

Reduces overall costs of operating facilities by coordinating all operations and programs, anticipating problems and proactively planning for them, and thereby minimizing costly "reactive" solutions.

Competitive Impact

Unknown.

Readiness Impact

Improves readiness through systematic planning, programming and scheduling of facility programs and operations so that health care services are more available, effective and responsive.

Relative Resources

Resources already exist. Use of the current Air Force Facility Master Plan as a guide for development would augment efficiency.

Estimated Timing

Planning can begin as soon as possible. Benefits begin upon fielding of the Master Plan guidance.

Suggested Alternatives and Why

The Services can continue to use an uncoordinated operations planning system. This will perpetuate the status quo, squander time, and unnecessarily expend other resources.

CUSTOMER SUPPORT GUIDE (BPI 44)

A comprehensive standard procedures guide is needed to help customers obtain logistics support. This guide should be available in a user friendly format.

Advantages

- Provides immediate customer access to up-to-date status of their orders.
- Gives customer access to on-line medical catalogs accelerates research.
- Allows access to history of customer past orders, which helps decision making.
- Minimizes or eliminates time spent by Medical Logistics staff on researching supply status.

Disadvantages

Reduces less personal interaction between customers and Medical Logistics staff.

Barriers

To implement an on-line user-friendly customer support guide with the existing systems will require an extensive decoding of many logistics codes. However, with DMLSS, this should not present a problem.

Cost Benefits

Cost minimal compared to benefits gained.

Competitive Impact

None.

Readiness Impact

Enhances readiness by increasing responsiveness to customers.

Relative Resources

None.

Estimated Timing

To be implemented as part of DMLSS/Medical Electronic Customer Assistance (MECA).

Suggested Alternatives and Why

None.

ESTABLISH VIDEO-CONFERENCING CAPABILITIES (BPI 48)

A large amount of time and money is spent by Service personnel on temporary duty to accomplish face-to-face meetings. In many instances, the meetings and exchange of information could be accomplished with video-conferencing capabilities. This technology is already in use at larger facilities. The use of this technology should be expanded to smaller facilities where economically feasible and appropriate.

Advantages

- Dramatically decreases personnel travel costs associated with attending meetings.
- Saves time to conduct meetings involving personnel at multiple locations (reduced travel time).
- Accommodates short suspense action requirements, which is much more responsive to urgent meeting needs.
- Allows documents and visual aids to be communicated with audio information.
- Provides next best method of instruction to "being there" for clinical instruction; realism or clinical procedures can be well displayed.
- Facilitates training more people at one time where fiscal restraints precluded this with high TAD/TDY expenses.
- Offers flexibility of instruction with videotaping capability; personnel who did not see the teleconference may do so once it is videotaped.

Disadvantages

- Requires significant funds to purchase the equipment.
- Smaller activities may not have personnel able to maintain/repair it; maintenance contracts may be costly.

Barriers to Implementation

- Requires the large amount of funding to link a significant number of treatment facilities.
- Creates the possibility to budget for and procure outdated technology, because technology is changing very rapidly in the industry.

Cost/Benefit

Cost savings described in advantages section.

Readiness Impact

Could prove useful to remote overseas and Conus locations for training and other types of conferencing capabilities.

Competition Impact

Unknown.

Relative Resources

Will require a large capital outlay.

Estimated Timing

Could phase in larger activities, then mid-sized, and finally smaller, as follows:

- Large: Within 1 year
- Mid: Within 2 years
- Small: Within 3 years

Suggested Alternatives

- Maintain status quo.
- Delay implementation and await technology proliferation of teleconferencing method at lower costs. This alternative may delay implementation 10 years.

AUTOMATE DOCUMENT MANAGEMENT (BPI 51)

A large amount of resources is devoted to filing, shipping, storing, and accessing Logistics auditable source documents in paper formats. These activities are extremely inefficient. Paper documents should be replaced with electronic filing media. Once documents have been sent to central depositories, users should be able to access the documents through networks by using appropriate search criteria.

Advantages

- Dramatically reduces, if not eliminates, lost paperwork. The Government pays a significant amount of money on interest penalty payments, largely because paperwork gets lost or misplaced.
- Saves time by accessing a database rather than searching through files full of paper.
- Frees up space by converting to an electronic media.
- Improves accuracy and completeness by using electronic templates so documents will be clear and minimizes problems with handwritten documents; users will be forced to answer questions on the templates that will require complete information.

Disadvantages

- Requires specialized software to be written, and extensive training in its use.
- Requires purchasing more computer hardware and forming local area networks as information will need to be shared among personnel.
- May result in lengthy implementation time from hard copy to electronic media.

Barriers to Implementation

- Many employees prefer the security of having a hard copy to refer to.
- Many employees lack confidence in computers and try to stay away from them as much as possible.

Cost/Benefit

May realize cost savings with higher personnel productivity.

Readiness Impact

Will potentially increase productivity during wartime logistics activities (e.g., Medical Supply Optical and Maintenance (MEDSOMs), Fleet Hospitals, etc.).

Competition Impact

None.

Relative Resources

Will require extensive hardware and software funding.

Estimated Timing

Software and hardware development/implementation will take 1-5 years.

Suggested Alternatives

Maintain status quo.

Appendix H

BPI to AS-IS Activity Matrix

Improvement Opportunity	Activity	Rating
1. <u>Unofficial Inventory Recapture</u> O&M funds are used to finance unknown quantities of unofficial inventory. This practice impairs the ability to identify true need for official inventories. Unofficial inventories can be nearly eliminated by managing most supply assets up to the point of consumption.	A113	4.00
*2. <u>Contracting Warrants</u> Formalize procedures for providing contracting warrants to medical logistics personnel so health care contracting positions are established within medical logistics.	A3 A1112	3.75
3. <u>Automated Requisition</u> Currently customer requisitions or issue requests are manually generated. These requests are individually received and processed by logistics personnel. These processes involve duplicate creation of data and are labor intensive, error prone, and time consuming. These processes should be automated to reduce labor, provide better customer support, and save time.	A1111 A1211	3.63
4. <u>Automated EDI for Contracted Services</u> The current DoD and Service procedures for contracting, purchasing, and making financial payments require extensive manual labor resulting in a long Process and Administrative Lead Time (PALT), excessive paper work, and delayed bill payment. Delayed payments result in high interest penalties, and long lead time results in excessive inventories. The Services should review private sector applications of EDI and where applicable to the DoD should be implemented.	A4 A43 A1112	3.50
5. <u>Consolidated Medical Logistics Field Office</u> The three Services independently operate component level (USAMMA, AFMLO, NMLC) logistics offices to oversee geographic areas. Greater economies could be realized by consolidating Medical Logistics functions in Tri-Service offices.	A13 A1131 A1133	3.25

Improvement Opportunity	Activity	Rating
<p>*6. <u>Critical Items List</u></p> <p>Currently materiel managers manage a list of materiel items considered critical for the organization. The need exists for users (wards, clinics, pharmacy, etc.) to be able to identify or flag items which are critical to them. Current legacy systems are not capable of allowing the customer to develop such a list which is specific to the customer's needs. Materiel managers could be more effective and responsive if the supply system used knew which items were critical for each customer's operation.</p>	A231	3.25
<p>7. <u>Consolidated Excess Property Program</u></p> <p>The three Services run separate excess property programs within the medical communities. These programs should be combined to allow for better reutilization of excess resources. Consolidate all excess programs under one office and publish a central list to all Services.</p>	A125 A1133	3.25
<p>*8. <u>Eliminate Annual Inventory Requirements</u></p> <p>Each year a complete inventory of store room items must be conducted. This is a labor intensive, costly, and disruptive process. The average time to conduct a complete store room inventory is one week. During the inventory period, the storeroom is closed to customers who must stockpile required supplies to compensate for this time, and considerable expenses are dedicated to the inventory process (i.e., wages, utilities, administrative support). Requirements for an annual inventory should be eliminated or revised. If eliminated, periodic spot checks should be conducted to sample inventory accuracy. These spot checks could focus on high dollar value inventory items (price x quantity) freeing logistics personnel from labor intensive counting activities. Small quantities in customer supply closets/carts or in the medical supply warehouse should not have to be inventoried other than during normal operations.</p>	A233 A21322 A21323	3.13

Improvement Opportunity	Activity	Rating
<p>9. <u>Improvement and Inclusion of Existing Automated Systems and Integration</u></p> <p>There are several automated systems employed in Medical Logistics that operate independently and do not interface with other systems. This results in duplication of efforts, additional training for multiple systems, and multiple work stations for related functions. There should be a single system that fully integrates all automation for Medical Logistics. This system software should also be compatible with other internal and external systems (e.g., Composite Health Care System (CHCS), Medical Office Automation (MED-OA)). Existing automated systems offer little on-line help. Training programs focus primarily on operating these systems versus the real functions of Medical Logistics. Future automated systems should have on-line help and built in tutorials so that training can be focused on Medical Logistics functions.</p>	<p>A0 A12</p>	<p>3.13</p>
<p>10. <u>Automated Technical Library</u></p> <p>Currently every command must stock their own library with product information at a considerable cost. There needs to be a central data bank of information for customers to use. This data bank would include specifications, technical literature, clinical lessons learned, and product comparisons. This information is currently available on CD-ROM and should be made accessible via modem from a central source.</p>	<p>A11 A122 A121 A1111 A1112 A124 A1241 A1242 A1243 A1244</p>	<p>3.13</p>
<p>11. <u>Automated Frustrated Shipment Tracking</u></p> <p>Items that need to be returned to the original source are currently not resolved in a timely manner. This creates items being stored awaiting disposition. Due to this delay financial inaccuracies may be created, and customer service may be impaired. Automated follow-up procedures for return of goods should be developed to eliminate delays.</p>	<p>A113 A1133 A112 A1133 A1222 A1223</p>	<p>3.13</p>
<p>12. <u>Automated Building Operations Management</u></p> <p>Current building operation programs (e.g., preventive maintenance, utilities, communication systems) are not managed consistently at the local level. Many programs are manually tracked and filed. This creates a duplication of effort and inconsistent procedures. In addition, requirements are often not identified in a timely and consistent manner. An automated system would assist in tracking and identifying requirements, increase consistency within the program, and ensure accurate record keeping.</p>	<p>A133 A1331 A1332 A1333</p>	<p>3.13</p>

Improvement Opportunity	Activity	Rating
<p>*13. <u>Acquisition of Additional Space for Managed Care Facilities</u></p> <p>Develop corporate methodology and pipeline for ease of gaining space quickly. The current process for acquisition of space to support coordinated care is not responsive. Options for other than building include leased space, temporary buildings, and using swing space (e.g., timesharing) for flexibility.</p>	<p>A13 A13121</p>	<p>3.13</p>
<p>*14. <u>Local "Partnership" Procurement Agreements</u></p> <p>Many items and services required for the operation of a health care facility are not centrally managed (i.e., depot stocked, prime vendor items). In order to reduce costs and enhance responsiveness, "partnership" agreements should be established with local or area civilian buying groups for the acquisition of these items and services. Agreements should include items normally negotiated for member hospitals with the provision to "expeditiously" add items.</p>	<p>A13 A1112 A1212 A12122 A1221 A1242 A1243</p>	<p>3.13</p>
<p>15. <u>Automated Inventory Management and Materiel Handling</u></p> <p>The majority of existing storage and distribution functions operate without contemporary material handling technology (e.g., conveyance systems, automated carousels, optical scanners, and bar code readers). This practice is labor intensive and prohibits implementation of Just-in-Time (JIT) supply support to the end user. Organizations should employ modern material handling technologies with the implementation schedule tied to return on investment. Future standard systems must be designed to integrate effectively with these material handling technologies.</p>	<p>A113 A114 A112</p>	<p>3.00</p>
<p>*16. <u>Social Issues</u></p> <p>Legislative acts have increased the cost of delivering the military medical logistics commodity. Some of these are the small business set aside, the Buy American Act, and mandatory wage requirements. If the military medical logistics activity is to operate as current civilian practices dictate, relief of these legislative acts must occur.</p>	<p>AO</p>	<p>3.00</p>

Improvement Opportunity	Activity	Rating
<p>*17. <u>Termination of Stockfund Operations at Army and Navy Medical Treatment Facilities</u></p> <p>The existing stockfund systems utilized by the Army and Navy are obsolete and do not promote use of new business practices (e.g., Prime Vendor, Dedicated Truck, Just in time inventory). Essentially, the current practices are labor and overhead cost intensive, cumbersome, redundant, facilitate an environment of permissible stocking in excess of actual needs and add no value to the Medical Logistics process. The systems require separate funds management processes when one funding source can be used efficiently. Termination of the current operations is the optimal solution. This will immediately return significant manpower and facility resources to the facilities as well as reduce existing inventories to acceptable levels.</p>	<p>A12 A124 A13 A142 A143</p>	<p>3.00</p>
<p>18. <u>Standard CBA</u></p> <p>The current method of generating a Cost Benefit Analysis (CBA) is inconsistent, time consuming, and labor intensive. Standard models with electronic templates should be developed to facilitate completion of a CBA for selected acquisitions.</p>	<p>A1 A3 A1112 A124 A121 A1211 A1212 A12122 A12123 A1243</p>	<p>2.88</p>
<p>*19. <u>Receipt for Work</u></p> <p>Payment for maintenance and repair to Civil Engineers or Department of public works are often verifiable due to incomplete tracking of tasks completed. A Standardized Work Receipt given to the facility management department showing task performed man hours needed, and labor rates would allow for accurate tracking and payments.</p>	<p>A21413 A2221 A2223 A22311 A2243</p>	<p>2.88</p>
<p>20. <u>Standard Corporate Facility Inventory and Condition Assessment</u></p> <p>There is no corporate facility inventory or condition assessment model which results in inefficient distribution of resources. Develop and implement standard reporting procedures for facility inventory and condition assessment.</p>	<p>A1314 A13</p>	<p>2.88</p>

Improvement Opportunity	Activity	Rating
21. <u>TPF for Acquiring Equipment</u> <p>Methods for acquiring individual equipment, equipment systems (packages), or outfitting of construction projects are currently not coordinated or integrated with financial, facility, or other support organizations. The idea of Total Package Fielding (TPF) uses an integrated approach to fielding equipment systems and their support and maintenance requirements. Develop methods to support the idea of TPF for all equipment acquisitions to include status, funding, procurement requirements and follow-on requirements for maintenance, training, and installation.</p>	A111 A1311	2.88
22. <u>Cross Sharing of Standard Contract Shells</u> <p>Local activities create service contract specifications that may exist at other locations. This is a time consuming and manpower intensive effort. Create a central repository that contains the requirements for a variety of service and contractual needs. Templates of standard criteria for contract performance should be developed and used by all Services.</p>	A3 A1112	2.88
23. <u>Inventory Management Technology</u> <p>(a) The Army accounts for furniture with a unit price of \$300 and above. The Air Force and Navy do not have this requirement. DoD should issue a policy eliminating the accounting requirement.</p> <p>(b) DoD should issue a policy to establish standard marking and inventory technology for all the Services. One possibility could be the use of Radio Frequency (RF) tags. The Air Force is currently testing this procedure to determine feasibility. RF tags would allow logistics personnel to determine where a piece of equipment was at any given time without having to physically locate the item.</p>	A123 A21322 A21323	2.88
24. <u>Automated Standard Facility Operational Programs</u> <p>Current facility operational programs (e.g., safety, life safety, waste management, physical security) are not managed consistently at the local level. Many programs are manually tracked and filed. This creates a duplication of effort and inconsistent procedures. An automated system would reduce the level of manpower required and increase consistency within the programs.</p>	A132 A1321	2.88
25. <u>Better Personnel Resource Management</u> <p>Identify skills required by facility and those personnel having these skills. Personnel often receive specialized training and are assigned where there is no requirement for this training.</p>	A21414 A2145	2.88

Improvement Opportunity	Activity	Rating
<p>26. <u>Training With Equipment Procurement</u></p> <p>DoD should issue a policy stating that all purchase requests for equipment include technical documentation and training for operators and/or maintenance personnel. A standard statement should also be used in the contractual documents when training is not required.</p>	<p>A1244 A1221</p>	<p>2.75</p>
<p>27. <u>Automated Material Management Receipt</u></p> <p>The present receiving process is very labor intensive. An effective state of the art automation system will streamline reconciliation of shipping manifest with received products, provide access to due-in records and facilitate immediate release of due-outs.</p>	<p>A112 A1113 A1141 A1223</p>	<p>2.75</p>
<p>28. <u>Navy Backorder Policy</u></p> <p>The Navy does not routinely backorder stocked supplies to their customers. If they can not fill a request from existing stock, the customer is notified, but has to keep reordering the item until it is finally released. The Navy should backorder the item to keep the customer from having to submit repetitive orders and use the backorder quantity to identify requirements.</p>	<p>A113 A1113 A1141</p>	<p>2.75</p>
<p>29. <u>Standard COTR Training</u></p> <p>As Contracting Officer Technical Representatives (COTRs) are assigned at the local level, they are advised of their responsibilities through various means. These means include local or centralized training at the service level and may be formal or informal. This results in many inconsistencies in the performance of COTR duties. Standard COTR training packages should be developed and made available to all services.</p>	<p>A3</p>	<p>2.63</p>
<p>30. <u>On-Line Central Repository Lessons Learned</u></p> <p>Currently there is not a standard methodology to develop lessons learned based on post occupancy evaluations for new construction. Additionally, each service independently collects and maintains records of lessons learned. This results in the potential to repeat mistakes as a result of not having this data available. There should be an automated central repository of data available to obtain information on post occupancy evaluations.</p>	<p>A131</p>	<p>2.63</p>

Improvement Opportunity	Activity	Rating
<p>31. <u>Risk Based Preventive Maintenance</u></p> <p>Preventive maintenance currently requires excessive man hours to complete. By implementing risk based preventive maintenance a significant savings can be realized. This will reduce the total number of man hours required for preventive maintenance allowing assets to be redistributed to the maintenance side of the house thereby reducing the number of maintenance contracts required. The Navy has already implemented this program in compliance with JCAHO.</p>	<p>A124 A1242 A133 A1241 A12414</p>	<p>2.63</p>
<p>32. <u>Improve Customer Service</u></p> <p>Changes sometimes occur during the procurement process which adversely impact the ability to satisfy customer needs. Current acquisition status should be available on line to the customer. This would allow more timely changes to be made during the acquisition process.</p>	<p>A1111 A1112 A1113 A1141</p>	<p>2.38</p>
<p>33. <u>Develop Life-Cycle Facility Strategy</u></p> <p>The life cycle management of facilities for real property maintenance activities, is structured such that only critical or emergency requirements are resolved. A corporate strategy for acquisition of a facility must advocate the maintenance and repair requirements through the life of the facility.</p>	<p>A133 A1331 A1332 A1333</p>	<p>2.38</p>
<p>34. <u>Continuous QA Survey of Customers</u></p> <p>Currently there are no standard criteria or method for effectively measuring how well an organization serves the customers needs. A standard system of data collection and analysis should be developed and implemented by the Medical Logistics community. This system should document customers' perceptions, provide analysis, feedback, and make recommendations for appropriate adjustments.</p>	<p>A1111</p>	<p>2.38</p>
<p>35. <u>Automate Procurement History</u></p> <p>Currently, the procurement history and alternate sources of supply are not readily identifiable. This puts an additional workload on the customer and logistics personnel. Information systems should allow for procurement history to be recorded. This history should include previous sources and prices.</p>	<p>A11 A1111 A1112</p>	<p>2.38</p>

Improvement Opportunity	Activity	Rating
<p>*36. <u>Consolidate Biomedical Training and Standardize</u></p> <p>Biomedical equipment maintenance training for the Tri-Services is accomplished at two locations. The Army/Navy and Air Force training curriculum differ greatly. Utilizing the best methodology and curriculum from the Tri-Services, combining and standardizing training will provide for a higher level of in-house support. Reducing outsourced service contract costs, and potentially minimizing the need for specialized manufacturers training could be realized.</p>	A21414 A2145	2.38
<p>37. <u>Establish Standard Electronic Templates</u></p> <p>Medical Logistics has a requirement to collect data as input to periodic reports. Often, the data is not readily available or not gathered in a format consistent with report formats. Establish standard electronic templates of reports linked to integrated databases. Under this procedure as databases are updated, real time reports would be available, and could be forwarded electronically as needed.</p>	A2	2.25
<p>38. <u>Establish Facility Management Training and Recruiting Program</u></p> <p>There are not enough trained personnel within the facility management arena. This creates inefficient planning and asset distribution. Establish an aggressive campaign to recruit, train, and retain personnel with engineering backgrounds to help plan and manage the facility assets.</p>	A132 A1321 A1311	2.25
<p>39. <u>Consolidate Electronic Form Management</u></p> <p>Different Service unique forms are often used for the same purpose. This creates unnecessary costs and duplication of effort in maintaining, procuring, and stocking forms. In addition, this hinders inter-service operational effectiveness. This is especially critical during joint exercises and contingencies. Standardization of all forms would eliminate these problems. Furthermore, these forms should be available on an electronic template.</p>	A0	2.25
<p>40. <u>Integrated Customer Support</u></p> <p>Customers must go to different sources within the logistics organization to acquire information, resources, and support. The logistics system needs to provide an integrated interface to the customer and clearly defined points of contact for customer service.</p>	A111	2.25

Improvement Opportunity	Activity	Rating
*41. <u>Medical Logistics Training</u> Review and integrate Tri-Service occupational skill requirements for medical logistics personnel to meet mission requirements. Develop standardized training programs from this occupational skill review.	A21414 A2145 A2232	2.13
*42. <u>Facility Master Plan</u> All operations and programs at the facility level should be coordinated and scheduled. A standardized program for developing a Facility Master Plan, established for all services by DoD and carried out by local facility management planners, would provide complete and effective management of medical facilities. The Air Force currently uses a similar system.	A221 A2213 A22133	2.13
*43. <u>Return for Credit Program</u> Improve and standardize methods Medical Logistics uses to accomplish/process returns for credit from commercial vendors for excess materiel. This will expand the use of credit return programs offered by vendors.	A1133 A1221 A1232	2.13
4. <u>Customer Support Guide</u> There needs to be a comprehensive standard procedures guide to assist customers in obtaining logistics support. This guide should be available in a user friendly electronic format.	A1111	2.13
45. <u>Improve Corporate Maintenance Awareness to Increase Funds</u> Currently the DoD spends insufficient funds for facilities maintenance and repair. The industry standard is between two to four percent of the replacement value of facilities. By not appropriating an adequate amount for maintenance and repair, large backlogs are created. Inadequate maintenance reduces the life expectancy of the facility and results in substandard facilities. A concerted effort must be made to develop an awareness of the significant costs associated with improperly maintained facilities such that increased appropriations are authorized.	A13 A133 A41	2.00

Improvement Opportunity	Activity	Rating
<p>46. <u>Improve and Standardize Asset Accounting and Visibility</u></p> <p>Services' implementation of property accounting and maintenance requirements criteria for medical materiel are inconsistent. This results in duplicate or incomplete databases, thereby not allowing total asset visibility. Incomplete data records may result in increased medical legal liability. In addition, extensive manpower is needed to maintain and reconcile duplicate databases. Standard accounting and maintenance business rules and data structures need to be adopted in order to eliminate these problems.</p>	<p>A111 A112</p>	<p>2.00</p>
<p>47. <u>User-Friendly Interface</u></p> <p>Logistics customers are required to be familiar with a broad set of logistics unique terminology and codes to communicate their needs and receive status of current requisitions. As a result, customers spend a large amount of time translating their needs into proper logistics terminology. A customer interface should be established which allows for standard English phrases instead of logistics unique codes and terms.</p>	<p>A0</p>	<p>2.00</p>
<p>48. <u>Establish Video-Conferencing Capabilities</u></p> <p>A large amount of time and money is spent by Service personnel on temporary duty to accomplish face to face meetings. In many instances, the meetings and exchange of information could be accomplished with video-conferencing capabilities. This technology is already in use at larger facilities. The use of this technology should be expanded to smaller facilities where economically feasible and appropriate.</p>	<p>A0</p>	<p>2.00</p>
<p>49. <u>Automate Suspended Item List</u></p> <p>Management of suspended items is labor intensive and prone to error. Information is created and transferred through paper media through several stages of inspection. To improve timeliness and accuracy, all suspended item lists should be automated. This level of automation comprises electronic communication from the point of origin through all inventory control points including customer inventories.</p>	<p>A112 A1132 A1133</p>	<p>2.00</p>
<p>50. <u>Automate Financial Management</u></p> <p>Lack of consolidated financial budget, and obligated data at the operating level hinders current business practice. Customers, logistics personnel, resource managers and administrators should have real-time access to financial data and financial management information.</p>	<p>A1111</p>	<p>1.88</p>

Improvement Opportunity	Activity	Rating
<p>51. <u>Automate Document Management</u></p> <p>There are a large amount of resources devoted to filing, shipping, storing, and accessing Logistics auditable source documents in paper formats. These activities are extremely inefficient. Paper documents should be replaced with electronic filing media. Once documents have been sent to central repositories users should be able to access the documents through networks by using appropriate search criteria.</p>	A0	1.75
<p>52. <u>Tri-Service Space/Functional Criteria</u></p> <p>Currently, only Tri-Service (DoD) space criteria is used in planning for new construction or renovation. There is no consolidated space utilization or functional criteria or resource based space allocation criteria. The result is inefficient space utilization at the local level and misplaced resources at the corporate level. Adopt and maintain resource-based Tri-Service (DoD) space and functional planning criteria.</p>	A1312 A13121	1.63
<p>53. <u>Establish Central Repository Facility</u></p> <p>There are innumerable regulations and guidelines dictating facility requirements (e.g., Occupational Safety and Health Administration (OSHA), National Fire Protection Agency (NFPA), Uniform Facility Accessibility Standards (UFAS)). Often there is no way to ensure compliance with all applicable regulations and guidelines. Establish a central repository for all facility regulations and guidelines.</p>	A13 A22	1.63

Appendix I Acronyms

ABC	Activity Based Costing
AF	Air Force
AFB	Air Force Base
AFMLO	Air Force Medical Logistics Office
AFSC	Air Force Specialty Code
AIS	Automated Information System
AK	Alternate Key
ANSI X .12	American National Standards Institute
ASD	Advanced Systems Development
ASD(HA)	Assistant Secretary of Defense, Health Affairs
BMAR	Backlog of Maintenance and Repair
BMET	Biomedical Equipment Technician
BPA	Blanket Purchase Agreement
BPI	Business Process Improvement
BPIP	Business Process Improvement Program
BPRM	Business Process Redesign Methodology
BSC	Billet Sequence Code
BWCW	Biological Warfare/Chemical Warfare
CAL	Calibration
CBA	Cost Benefit Analysis
CHAMPUS	Civilian Health and Medical Program of the Uniformed Services
CHCS	Composite Health Care System
cIM	corporate Information Management
CONUS	Continental United States
COR	Contracting Officer Representative
COTR	Contracting Officer's Technical Representative
CPD	Central Processing and Distribution
CT	Computer Tomography
DBOF	Defense Business Operations Funds
DBPA	Decentralized Blanket Purchase Agreement
DCSLOG	Deputy Chief of Staff, Logistics
DEPMEDS	Deployable Medical Systems
DFAR	Defense Federal Acquisition Regulation
DFAS	Defense Finance and Accounting Service
DLA	Defense Logistics Agency
DMFO	Defense Materiel Field Office
DMLSS	Defense Medical Logistics Standard Support
DMRD	Defense Management Review Decision
DMSB	Defense Materiel Standardization Board
DMSSC	Defense Medical Systems Support Center
DoD	Department of Defense
DPSC	Defense Personnel Support Center

DRG	Drug Related Diagnosis
DRMO	Defense Reutilization and Marketing Office
DVA	Department of Veterans Affairs
ECG	Electrocardiogram
EDI	Electronic Data Interchange
EDS	Electronic Data Systems
EIC	End Item Code
EKG	Electrocardiogram
EOQ	Economic Order Quantity
EPA	Environmental Protection Agency
ETO	Ethylene Oxide
FAR	Federal Acquisition Regulations
FDA	Food and Drug Administration
FEA	Functional Economic Analysis
FIM	Functional Integration Management
FK	Foreign Key
FSS	Federal Supply Schedule
FY	Fiscal Year
GFM	Government Furnished Materiel
GSA	General Service Administration
HA	Health Affairs
HVAC	Heating, Ventilation, and Air Conditioning
ICOM	Input, Control, Output, Mechanism
IDEF	Integrated Computer Aided Manufacturing Definition Language
IDEF0	Activity Model
IDEF1X	Data Model
ISSA	Inter-Service Support Agreement
JCAHO	Joint Commission for the Accreditation of Healthcare Organizations
JCS	Joint Chiefs of Staff
JIT	Just-In-Time
LCDR	Lieutenant Commander
LMI	Logistics Management Institute
LOGMARS	Logistics Application of Automated Marking and Reading Symbols
MECA	Medical Electronic Customer Assistance
MEDLOG	Medical Logistics Systems
MED-OA	Medical-Office Automation
MEDSOMS	Medical Supply Optical and Maintenance
MEPRS	Medical Expense and Performance Reporting System
MFIM	Medical Functional Integration Management
MHSS	Military Health Services System
MICS	Medical Inventory Control System
MILCON	Military Construction

MILSTRIP	Military Standard Receipt and Issue Procedures
MOS	Military Occupation Specialty
MOU	Memorandum of Understanding
MRI	Magnetic Resonance Imagery
MSDS	Materiel Safety Data Sheet
MTF	Medical Treatment Facility
NFPA	National Fire Protection Agency
NMCM	Not Mission-Capable for Maintenance
NMCS	Not Mission-Capable for Supply
NMFO	Naval Materiel Field Office
NMLC	Navy Medical Logistics Command
NSN	National Stock Number
OB-GYN	Obstetrics-Gynecology
OCONUS	Outside Continental United States
O&M	Operations and Maintenance
OMA	Operations and Maintenance, Army
OP	Other Procurement
OPD	Other Procurement, Defense
OSHA	Occupational Safety and Health Administration
OST	Order Ship Time
PALT	Processing and Administrative Lead Time
PAR	Periodic Automatic Resupply
PBD	Program Budget Decision
PK	Primary Key
PM	Preventive Maintenance
POC	Point of Contact
PPBS	Planning, Programming, and Budgeting System
QA	Quality Assurance
QC	Quality Control
RCM	Resource Cost Manager
RDT&E	Research, Development, Test, and Evaluation
RF	Radio Frequency
RPIE	Real Property Installed Equipment
RPMA	Real Property Maintenance Activity
SBA	Small Business Administration
SMEI	Singly Managed Materiel Equipment Item
SRA	Systems Research and Applications Corporation
SSI	
TCN	Transportation Control Number
TPF	Total Package Fielding
UFAS	Uniform Facility Accessibility Standards
USAF	United States Air Force

USAMMA
USNR
USPHS

United States Army Medical Materiel Agency
United States Naval Reserve
United States Public Health Services

WRM

War Reserve Materiel

Appendix J Terms

Activity Based Costing (ABC)

An accounting technique that allows an enterprise to determine the actual costs associated with each product and service produced by that enterprise without regard to the organizational structure of the enterprise.

Activity Model

A graphic representation of a business process that exhibits the activities that make up the business process to any desired level of detail. An activity model reveals the interactions between activities in terms of inputs and outputs while showing the controls placed on each activity and the types of resources assigned to each activity.

Air Force Specialty Code (AFSC)

An identifier that relates to a unique job description.

Alternate Key (AK)

An attribute or group of attributes that identifies an entity uniquely but has not been chosen as the Primary Key. Each attribute (whether one or more) in an alternate key is assigned the same number to indicate that they form a group.

Assemblages

A medical set that consists of a combination of expendable, durable, or nonexpendable items. When an assemblage is issued to a user, a components list is included.

Benchmarking

A method of measuring processes against those of recognized leaders. It helps establish priorities and targets leading to process improvement. It is undertaken by identifying processes to benchmark and their key characteristics; determining who to benchmark; collecting and analyzing data from direct contact, surveys, interviews, technical journals, and advertisements; determining the "best of class" from each benchmark item identified; and evaluating the process in terms of the benchmark set and the improvement goals.

Billet Sequence Codes (BSC)

An authorized personnel requirement listed on an organization's personnel manpower document. The particular occupational specialty required may be identified by this code.

Blanket Purchase Agreement (BPA)

Agreements negotiated by DPSC or the local contracting officer with specific vendors to cover the recurring requirements for selected local purchase items.

Business Process Improvement Program (BPIP)

The application of a Business Process Redesign Methodology (BPRM) to one or more related business processes enabling an enterprise to improve the value of its products and services while reducing resource requirements. The results of a successful BPIP are productivity and quality improvements. A business case or action plan is a required deliverable for all BPIP actions. A BPIP may or may not include business process redesign actions.

Business Process Redesign

The action of analyzing AS-IS activity and rule models with the intent to construct a TO-BE activity and rule model that will yield potential improvements in the performance of the business process.

Business Process Redesign Methodology (BPRM)

A well-defined, integrated set of methodologies, techniques, and automated tools that enables an enterprise to conduct a BPIP.

Civilian Health and Medical Program of the Uniformed Services (CHAMPUS)

A reimbursement program administered by the DoD to provide health care services to authorized beneficiaries receiving care from civilian sources.

Consumables

Supplies that are consumed in use (e.g., surgical dressings and drugs) or that lose their identity (e.g., repair parts).

Context Diagram

Represents a single activity of the subject being modeled.

Continuum of Conflict

Natural disasters, armed hostilities, and/or other contingencies that drive the readiness posture of the military community.

corporate Information Management (cIM)

A DoD program designed to reduce costs and increase effectiveness through analysis of business processes. The main focus of the initiative is on management methods, and its primary objective is business process improvements.

Data Model (Business Rule Model)

A graphical representation of an organization's information and data assets expressed in terms of entities and relationships. Relationships are also called business rules because they enable or constrain business actions. Data models, like activity models, have AS-IS and TO-BE representations.

Decentralized Blanket Purchase Agreement (DBPA)

These contracts allow authorized individuals within and outside the contracting office to submit orders directly to the vendor.

Decomposition Diagram

A more detailed, lower level diagram representing the internal activities of the parent activity box.

Defense Medical Facilities Office (DMFO)

The resource sponsor responsible for identifying requirements, prioritizing needs, and allocating funds for maintenance, renovation, and replacement of health care facilities. DMFO works for the Assistant Secretary of Defense for Health Affairs.

Defense Medical Standardization Board (DMSB)

A DoD board whose mission is to standardize supplies and equipment used in contingency; war reserve; and deployable medical systems, sets, kits, and outfits.

Defense Reutilization and Marketing Office (DRMO)

The DoD office responsible for the collection, redistribution, sales, and disposal of excess and unserviceable materiel.

Diagnosis-Related Group (DRG)

A classification for a medical diagnosis. It provides specific codes that are used to describe the reason for admitting a patient to a hospital. DRGs were established as a means to control health care costs. A statistical average is used by third-party payers to set predetermined fees based on the admission diagnosis.

Durables

An expendable item that is not consumed in use and has a life expectancy in excess of one year, but does not qualify as an equipment item.

Electronic Commerce

A complementary set of technology and business practices that transmit standard business transactions (e.g., orders, invoices, and payments) electronically.

Enterprise Data Model

The common representation of the conceptual business rules within an organization. Using IDEF1X techniques, this model is shown as data entities and relationships.

Federal Acquisition Regulations (FAR)

A set of regulations that governs the acquisition of materiel for Government agencies.

Foreign Key (FK)

A primary key of a (parent) entity that is contributed to another (child) entity across a relationship.

Functional Economic Analysis (FEA)

A methodology for analyzing and evaluating alternative investments and management practices. Within DoD, an FEA is a business case.

IDEFO

An activity or process modeling technique.

IDEFIX

A rule or data modeling technique.

Input, Control, Output, Mechanism (ICOM)

The acronym for the roles of data or material on an activity model. ICOMs are represented by arrows that interconnect activity boxes. They are named using a noun or noun phrase.

Input. Data or material used to produce an output of an activity.

Control. Data that constrain or regulate the activity. Controls regulate the transformation of inputs into outputs.

Output. Data or materials produced by or resulting from the activity. It must include the input data in some form.

Mechanism. Usually people, machines, or existing systems that provide energy to, or perform the activity.

Integrated Computer Aided Manufacturing Definition Language (IDEF)

IDEF modeling techniques were derived from the Integrated Computer-Aided Manufacturing (ICAM) program sponsored by the U.S. Air Force. The widely used techniques were designed to capture the processes and structure of information in an organization.

Inter-Service Support Agreement (ISSA)

A written agreement between two or more Services that delineates terms of a support arrangement.

Investment Equipment

An equipment item or system with a unit cost of \$15,000 or more that is funded through the Other Procurement (OP) appropriation.

Joint Commission for the Accreditation of Healthcare Organizations (JCAHO)

An organization that verifies that health care operations comply with guidance and standards established by the commission.

Leaf Node

A node that depicts the lowest level decomposition of an activity.

Materiel Safety Data Sheet (MSDS)

A document that provides information concerning chemical components of a materiel item. It provides cautions, disposal instructions, and procedures for treatment of toxicity.

Medical Expense and Performance Reporting System (MEPRS)

A DoD accounting system used to record man-hours and expenses for the performance of work.

Medical Functional Integration Management (MFIM)

A DoD Health Affairs office responsible for reviewing business processes and identifying improvements for the functional areas of blood, dental, logistics, managed care, preventive medicine, nursing, and wartime medicine.

Memorandum of Understanding (MOU)

A written agreement between two or more agencies or organizations that delineates terms of a support arrangement.

Military Construction (MILCON) Project

An identified construction program in excess of \$300,000.

Military Occupational Specialty (MOS)

An alphanumeric code that serves as a skill identifier for Army enlisted personnel.

Minor Equipment

Medical equipment with a unit cost under \$15,000 that is purchased using O&M funds. This equipment is also called expense equipment.

National Fire Protection Association (NFPA)

An organization that sets guidance for fire protection. This guidance is recognized as the authority for fire protection compliance.

National Stock Number (NSN)

A 13-character identifier for an item of supply or equipment listed in the federal supply system.

Node Tree

A node tree is a type of activity diagram. An activity and its decompositions are displayed in a hierarchical manner. No ICOMs are shown on a node tree. Since activity diagrams and their decompositions are represented on many pages in a model, a node tree can be used to overview a model. They are also useful for trying out different decomposition strategies before drafting activity diagrams.

Occupational Safety and Health Association (OSHA)

An organization responsible for setting the standards for safety of personnel within the working environment.

Operation and Maintenance Funds (O&M Funds)

Congressionally appropriated funds allocated to organizations to allow for the operation of day-to-day business.

Other Procurement (OP)

A congressional appropriation specifically for the acquisition of equipment and systems with a unit cost of \$15,000 and above.

Planning, Programming, and Budgeting System (PPBS)

An annual process required to obtain resources from congressional appropriations.

Primary Key (PK)

An attribute or group of attributes that has been chosen as the unique identifier of an entity

Prime Vendor

A vendor under contract with DPSC to satisfy consolidated requirements by participating organizations.

Processing and Administrative Lead Time (PALT)

The time it takes from processing a requisition to awarding the purchase order or contract.

Radio Frequency (RF) Tag

An equipment identifier that transmits a radio frequency signal to facilitate inventory management.

Retail Supply System

A system of managing materiel for issue or resale to customers within the Services.

Specialty Skill Identifier (SSI)

An alphanumeric code that serves as a skill identifier for Army officers.

War Reserve Materiel (WRM)

Supplies and equipment required to augment peacetime assets to support forces, missions, and activities reflected in the Service war plans.

This Page Intentionally Left Blank

Appendix K Bibliography

Director of Defense Information, Office of the Secretary of Defense. *Department of Defense 8020.1-M (Draft), Functional Process Improvement*. Washington, August 1992.

Functional Integration Management, Medical Logistics. *Goals, Objectives, and Strategies for Medical Logistics*, Release 3.0. Falls Church, VA, 10 December 1991.

Medical Logistics Workshop. *Medical Logistics Functional Integration Management Activity Based Costing and Data Modeling Workshop*, Volumes I and II. Arlington, VA, April 1993.

This Page Intentionally Left Blank